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DEPARTMENT OF THE INTERIOR.
UNITED STATES GEOLOGICAL SURVEY OF THE TERRITORIES.
F. V. HAYDEN, U. S. GEOLOGIST-IN-CHARGE.

MISCELLANEOUS PUBLICATIONS.—No. 1.

LISTS OF ELEVATIONS

PRINCIPALLY IN

THAT PORTION OF THE UNITED STATES

WEST OF

THE MISSISSIPPI RIVER.

THIRD EDITION.

COLLATED AND ARRANGED
BY
HENRY GANNETT, M. E.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1875.

P R E F A C E.

In this third edition of the "List of Elevations" I have been enabled to increase largely the list of towns, cities, &c. Most of these elevations are from railroad levels, and give the elevation of the track. For many of the others I am indebted to the Dictionary of Elevations recently published by Dr. J. M. Toner. Many of them, especially of military posts, are derived from the records of the medical department of the U. S. Army, while the remainder are barometrical measurements, drawn from various sources.

The list of mountain peaks has been largely increased, partly by extending the scope of the list, making it include the Appalachian system. The orography of this system has been thoroughly studied by Professor A. Guyot, and the elevations of the peaks in this system rest on his authority.

In addition to these, the elevations of a few of the best-known mountains in foreign countries are given.

The list of passes, in high ranges, has been doubled in size. The additions have been made from various sources, which are specified in the list.

For purposes of comparison I have added to the list of plateaux in the United States a list of the best-known ones in foreign countries.

The list of lakes I have extended in order to include those in all parts of the country.

The table of elevations of the limit to the growth of timber is extremely incomplete. Its elevation in Colorado and in parts of Wyoming and Montana has been determined by a sufficient number of observations, under different conditions, to fix it quite accurately. But in other parts of the United States observations are very few, or entirely wanting.

Elevations at the water-level of rivers have been but slightly increased in number. On the Mississippi River several have been corrected and a few added.

The number of railroad profiles has been largely increased.

I am especially indebted, in the preparation of this edition, to Mr. James T. Gardner, of this survey, for his valuable assistance in collecting and arranging material; also to Professor Hayden, Professor A. Guyot, Professor William H. Brewer, Professor Thomas, and to railroad officials who have favored me with profiles of their roads.

SECTION I.

MISCELLANEOUS TABLES.

TABLE I.
ELEVATIONS OF TOWNS, CITIES, ETC.

Arkansas.

Cities, Towns, &c.	Eleva- tion.	Cities, Towns, &c.	Eleva- tion.
Beebe.....	235	Judsonia.....	209
Cabot.....	279	Little Rock.....	309
Camden.....	123	Madison.....	283
Campbell.....	223	McAlmont.....	263
Fayetteville.....	1,350	Minturn.....	251
Fort Smith.....	460	Napoleon.....	142
Fulton.....	242	Newport.....	218
Gaines' Landing.....	757	O'Kean.....	261
Garner.....	211	Peach Orchard.....	276
Higginson.....	210	Pittsburgh.....	418
Holland.....	243	Preston.....	790
Hopefield.....	294	Russell.....	223
Jacksonport.....	214	Washington.....	660
Jacksonville.....	273		

Missouri.

Aurora.....	1,350	Elston.....	715
Belmont.....	328	Ely.....	731
Bergen.....	515	Fairfield.....	977
Billings.....	1,375	Farmer's City.....	885
Bottsville.....	763	Fayette.....	767
Bourbon.....	933	Franklin.....	480
Brookfield.....	802	Fredericktown.....	756
Brunswick.....	692	Gallagher.....	785
Buckland.....	889	Gasconade.....	483
Cadet.....	805	Glenallen.....	452
Calhoun.....	884	Glendale.....	568
California.....	864	Granby City.....	1,063
Cameron.....	1,067	Hannewell.....	740
Carbon.....	867	Harlem.....	782
Chamois.....	531	Hermitage.....	1,037
Charleston.....	319	Hibernia.....	400
Chiltenham.....	458	Holden.....	854
Clarence.....	867	Independence.....	1,034
Clinton.....	917	Ironton.....	912
Darley.....	1,627	Jefferson City.....	556
Deerfield.....	901	Kansas City.....	764
De Soto.....	494	Kingsville.....	924
Dixon.....	1,168	La Clede.....	830
Dorchester.....	1,275	Ladree.....	855
Doren.....	870	Lakeman.....	792
Dozier.....	455	La Monte.....	878
Dresden.....	806	La Plata.....	898
Dundee.....	536	Lathrop.....	1,105

Missouri—Continued.

Cities, Towns, &c.	Eleva-tion.	Cities, Towns, &c.	Eleva-tion.
Leasburgh.....	Feet. 1,032	Reelsville.....	599
Logan.....	1,362	Ritchville.....	1,060
Macon.....	R. R.	Rockville.....	811
Marble Hill.....	919	Rolla.....	R. R. 1,201
Marquand.....	411	Roseville.....	595
Marshfield.....	564	St. Genevieve.....	372
Meramac.....	1,521	St. Joseph.....	R. R. 820
Mexico.....	435	St. Louis, City directrix.....	R. R. 428
Middlebrook.....	790	" high water in Miss. river in 1844.....	R. R. 436
Miller's Landing.....	1,144	" low water (extreme)....	394
Moneteau.....	508	St. Paul.....	428
Monroe.....	904	Schell City.....	864
Montgomery.....	794	Sedalia.....	R. R. 889
Morrisson.....	790	Seneca.....	R. R. 883
Morley.....	522	Shelbina.....	R. R. 718
Moselle.....	338	Sleeper.....	1,201
Neelysville.....	955	Smithton.....	888
Neosho City.....	298	Springfield.....	R. R. 1,382
New Madrid.....	1,015	Stanton.....	1,004
Newport.....	530	Stewartsville.....	955
Niaugua.....	482	Stockton.....	849
Oakland.....	611	Sullivan.....	959
Ogden.....	500	Sulphur Spring.....	403
Ohio City.....	505	Sylvania.....	477
Osage City.....	541	Syracuse.....	944
Osborn.....	1,033	Taylorville.....	470
Otterville.....	695	Utica.....	R. R. 796
Pacific.....	480	Verona.....	1,250
Palmyra.....	694	Warrensburgh.....	R. R. 874
Piedmont.....	495	Webster.....	525
Pierce City.....	1,225	Wellesbury.....	778
Plattsburgh.....	914	Woodlawn.....	824
Plymouth.....	1,356	Yeatman.....	485
Prairie City.....	771		

Iowa.

Ackley.....	R. R.	Calamus.....	720
Adel.....	1,074	California Junction.....	R. R. 1,020
Afton.....	1,223	Carroll.....	R. R. 1,272
Agency.....	R. R.	Cascade.....	752
Albia.....	R. R.	Casey.....	1,208
Albion.....	R. R.	Cedar Creek.....	616
Algona.....	946	Cedar Falls.....	878
Alpine.....	1,500	Cedar Rapids.....	R. R. 741
Ames.....	622	" " (Cedar River).....	719
Barnum.....	934	Ceres.....	825
Batavia.....	1,173	Chariton.....	R. R. 1,041
Bearons.....	648	Charles City.....	1,037
Beaver Station.....	1,238	Chelsea.....	R. R. 798
Belfast.....	1,039	Chequaque.....	R. R. 612
Belleplaine.....	516	Cherokee.....	1,204
Big Creek.....	831	Chillicothe.....	R. R. 654
Big Mound Summit.....	590	Clear Lake.....	984
Blairstown.....	745	Clinton, high water in Miss. river in 1864.....	R. R. 584
Blencoe.....	850	Clinton bridge.....	R. R. 602
Bonaparte.....	1,062	Colfax.....	753
Boone.....	R. R.	Colo.....	R. R. 1,055
Boonesborough.....	951	Comstock.....	684
Burlington, high water in Miss. river.....	1,160	Coon River.....	1,017
	529		

Iowa—Continued.

Cities, Towns, &c.	Eleva-tion.	Cities, Towns, &c.	Eleva-tion.
	<i>Feet.</i>		<i>Feet.</i>
Corning	R. R.	1,140 Julian	845
Council Bluffs.....	R. R.	1,000 Kellogg	821
Council Grove.....		1,257 Keokuk	508
Crawfordsville		710 Kilbourne	591
Crescent	R. R.	1,009 Le Grand	949
Cresco		1,858 Le Mars	1,196
Cromwell	R. R.	1,233 Liscomb	1,015
Croton		521 Little Sioux	1,042
Danville	R. R.	722 Lucas	857
Davenport, datum C., R. I & P. .	R. R.	560 Lyons City	630
“ high water in Miss. river.....	R. R.	570 Madison	600
“ low water in Miss. river.....	R. R.	553 Manchester	925
Dennison	R. R.	1,269 Marshall	906
Des Moines		586 Melrose	863
Dewitt		698 Middletown	731
Downing		665 Missouri Valley Junction	1,020
Dubuque, low water in Miss. river.....	R. R.	665 Mitchell	1,195
Dunlap	R. R.	599 Modale	1,021
Durant		1,088 Moingona	919
Dysart		599 Mona	868
Earlham		1,109 Mondamin	1,031
East Orange		714 Mount Pleasant	732
East Side	R. R.	438 Muscatine	586
Eddyville		1,088 Nashua	993
Eldora	R. R.	605 Nevada	1,013
Elkadar		1,390 New Jefferson	1,069
Fairbanks		655 Newton	1,400
Fairfax	R. R.	1,022 Nodaway	1,093
Fairfield	R. R.	746 Norway	808
Farley Junction		1,083 Oakland	1,205
Farmington		780 Onawa City	1,068
Fayette Village		775 Orford	864
Floyd's Bluffs	R. R.	1,141 Osceola	1,134
Fort Atkinson		1,000 Ottumwa	639
Fort Croghan		1,404 Paradise	1,146
Fort Des Moines		700 Pleasant Plain	950
Fort Dodge		1,250 Quasqueton	888
Fort Madison		780 Red Oak	1,048
Frederic	R. R.	1,024 Rossville	1,400
Fulton		550 Russell	1,028
Given		744 St. Augusta	1,197
Glendale	R. R.	741 St. Mary's	1,200
Glenwood	R. R.	499 Sac City	900
Glidden	R. R.	752 Scranton	1,089
Grove City		996 Sergeant's Bluffs	1,114
Guthrie		1,238 Sheldon	706
Guttenberg		1,253 Sibley	1,485
Hagan	R. R.	1,253 Sioux City	1,123
Harmony	R. R.	1,251 Skunk River	905
Harrisgrove		690 Sloan	1,091
Hazard		1,045 Stanwood	862
Hesper		1,056 State Centre	1,082
Highland	R. R.	900 Steamboat Rock	1,024
Homestead		1,405 Thayer	1,002
Honey-creek Station		720 Tiptop	1,437
Independence		1,311 Toledo	827
Independent		848 Tyrone	829
Iowa City	R. R.	1,020 Union	953
Iowa Falls		850 Vail	1,272
Jamesville		614 Vallisca	1,072
		626 Vawtersgrove	1,500
		1,070 Victoria	788
		910 Walcott	741

Iowa—Continued.

Cities, Towns, &c.	Eleva-tion.	Cities, Towns, &c.	Eleva-tion.
Walnut	R. R. 1,056	Feet. Westside	R. R. 1,339
Washington	R. R. 757	Whitfield	R. R. 685
Waubech	R. R. 988	Woodbine	R. R. 1,070

Minnesota.

Afton	R. R. 950	Gorton	R. R. 1,008
Aiken	R. R. 600	Grand Crossing	R. R. 626
Albany	R. R. 1,187	Hancock	R. R. 1,141
Aldrich	R. R. 1,326	Hawley	R. R. 1,150
Alexandria	R. R. 1,382	Hayward	R. R. 1,240
Anoka	R. R. 869	Heron Lake	R. R. 1,394
Atwater	R. R. 1,198	Herman	R. R. 1,054
Audubon	R. R. 1,308	Hersey	R. R. 1,465
Averill	R. R. 918	Hinckley	R. R. 1,023
Avon	R. R. 1,116	Hobart	R. R. 1,384
Bass Lake	R. R. 921	Hospers	R. R. 1,438
Beaver	R. R. 1,600	Hutchison	R. R. 1,050
Beaver Bay	R. R. 1,270	Ida	R. R. 1,402
Becker	R. R. 963	Isinours	R. R. 888
Belle Plaine	R. R. 781	Itasca	R. R. 856
Belleprairie	R. R. 1,125	Kandiyohi	R. R. 1,207
Bellevue	R. R. 1,075	Kasota	R. R. 853
Beltrami	R. R. 903	Kettle River	R. R. 1,112
Benson	R. R. 1,033	Kimberley	R. R. 1,231
Bigelow	R. R. 1,603	Kirkhoven	R. R. 1,095
Big Lake	R. R. 921	Kittson	R. R. 886
Bingham Lake	R. R. 1,397	La Crescent	R. R. 742
Blakeley	R. R. 785	Lake Crystal	R. R. 1,053
Bois Francs	R. R. 1,238	Lanesborough	R. R. 831
Borup	R. R. 912	Langola	R. R. 1,054
Brainerd	R. R. 1,204	Le Mars	R. R. 1,196
Breckenridge	R. R. 948	Le Sueur	R. R. 811
Burlington	R. R. 645	Litchfield	R. R. 1,116
Butterfield	R. R. 1,163	Little Falls	R. R. 1,109
Campbell	R. R. 968	Long Lake	R. R. 940
Chatfield	R. R. 900	Lyle	R. R. 1,306
Christina	R. R. 2,219	Madelia	R. R. 998
Clear Lake	R. R. 984	Mankato	R. R. 849
Clearwater	R. R. 975	Manonom	R. R. 833
Cockato	R. R. 1,013	Marion	R. R. 1,200
Crookston	R. R. 881	Melrose	R. R. 1,196
Crow Wing	R. R. 1,181	Minneapolis	R. R. 821
Darwin	R. R. 1,118	Minneaska	R. R. 1,600
De Graff	R. R. 1,047	Minnieska	R. R. 764
Delano	R. R. 914	Moorhead	R. R. 904
Detroit	R. R. 1,362	Moose Lake	R. R. 1,052
Doran	R. R. 959	Morris	R. R. 1,113
Douglass	R. R. 1,112	Motley	R. R. 1,220
Duluth	R. R. 605	Mountain Lake	R. R. 1,277
East Henderson	R. R. 791	Muskoda	R. R. 1,083
Elk River	R. R. 894	New Ulm	R. R. 1,500
Evansville	R. R. 1,345	Norman	R. R. 1,322
Felton	R. R. 916	Oakdale	R. R. 967
Forest Lake	R. R. 904	Oakes	R. R. 1,228
Fort Ridgley	R. R. 1,230	Osakis	R. R. 1,328
Fort Ripley	R. R. 1,130	Ottowa	R. R. 847
Fort Snelling	R. R. 820	Owatona	R. R. 1,204
Fountain	R. R. 1,289	Perham	R. R. 1,366
Frazee	R. R. 1,409	Pillager	R. R. 1,180
Glyndon	R. R. 923	Pine City	R. R. 944

Minnesota--Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Eleva-tion.
	<i>Feet.</i>		
Rabbit Run.....	R. R. 968	Sicottes	R. R. 1,265
Ramsey.....	R. R. 1,207	South Bend.....	R. R. 866
Randall.....	R. R. 1,036	Stanley	R. R. 902
Red River Falls.....	R. R. 1,122	Stillwater	R. R. 756
Rolette.....	R. R. 894	Stockton	R. R. 849
Rush City.....	R. R. 909	Swede Grove	R. R. 1,177
Rushford.....	R. R. 711	Thomson	R. R. 1,027
St. Anthony.....	R. R. 829	Tintah	R. R. 982
St. Anthony's Falls.....		Tumuli	R. R. 1,196
St. Cloud, west side Miss. riv.....	R. R. 1,025	Two Rivers	R. R. 1,124
" low water Miss. riv.....	R. R. 953	Victoria	R. R. 1,366
St. James.....	R. R. 1,058	Wabashaw	R. R. 850
St. John's.....	R. R. 1,107	Wadena	R. R. 1,349
St. Joseph.....	R. R. 1,074	Watab	R. R. 1,048
St. Oluff.....	R. R. 1,335	Waverley	R. R. 998
St. Paul, low water Miss. riv.....	R. R. 676	Wayzata	R. R. 922
" high water Miss. riv.....	R. R. 697	West Union	R. R. 1,323
" Depot	R. R. 689	Wilder	R. R. 1,423
St. Vincent, bank of Red riv.....	R. R. 792	Wild Rice	R. R. 910
" high water 1866.....	R. R. 787	Willmar	R. R. 1,115
" usual wat'r surface.....	R. R. 758	Windom	R. R. 1,326
Sauk Centre.....	R. R. 1,239	Winnebago City	R. R. 1,089
Sauk Rapids.....	R. R. 999	Withington	R. R. 1,266
" Miss. riv.....	R. R. 982	Worthington	R. R. 1,563
Shakopee.....	R. R. 845	Wyoming	R. R. 897
Sibley.....	R. R. 960		

Texas.

Alleton.....	222	Fort Duncan.....	1,460
Austin.....	200	Fort Ewell	200
Benchley.....	306	Fort Gates	1,000
Benton.....	435	Fort Graham	900
Bluff.....	180	Fort Inge	845
Bonham.....	435	Fort Lancaster	2,350
Bremard	460	Fort Lincoln	900
Brenham	350	Fort Martin Scott	1,300
Camp Concordia.....	3,600	Fort Mason	1,200
Camp Verde.....	1,400	Fort McIntosh	806
Castroville	672	Fort McKavett	2,060
Cedar Grove.....	60	Fort Merrill	150
Chappell Hill.....	542	Fort Polk	15
Columbus	250	Fort Quitman	3,710
Corpus Christi	20	Fort Stockton	4,910
Cross Roads.....	672	Fort Terrell	1,320
Cypress	156	Fort Worth	1,100
Dallas	467	Frontera	3,796
Deloraine	960	Fulton	242
Edinburgh	422	Giddings	536
Elciario	3,607	Gilmer	950
Elgin	600	Goliad	50
Englewood	R. R. 420	Gonzales	150
Ennis	547	Groesbeck	481
Eureka	69	Hammond	410
Fort Belknap	1,600	Harrisburgh	38
Fort Bliss	3,830	Harrison	526
Fort Brown	165	Hearne.....	R. R. 310
Fort Chadbourne	2,120	Helena	600
Fort Clark	3,830	Hockley	225
Fort Croghan	1,000	Houston	R. R. 50
Fort Davis	4,700	Howe	859

Texas—Continued.

Cities, Towns, &c.	Eleva-tion.	Cities, Towns, &c.	Eleva-tion.
Humboldt	Feet. 887	Pecos Springs.....	Feet. 3,098
Hutchins	470	Perry.....	483
Indianola.....	25	Piedro Runta	744
Jacksonville	R. R.	Plano	667
Jewett	R. R.	Presidio del Norte	2,779
Keche.....	R. R.	Quihi	856
Killgore.....	R. R.	Random	147
Lake	R. R.	Reagan	375
Laredo.....		Red River City	572
Larissa.....		Reynolds.....	R. R. 421
Lavaco.....		Rice	473
Ledbetter		Richardson	643
Leon Spring.....		Ringgold Barracks	521
Listerdale		San Antonio	600
Long View	R. R.	Seco	689
McKinney.....		Sherman	745
Mexia		Tehuacana	482
Miller.....		Thompson	121
Millican		Thornton	496
Navasoto		Tinge	892
Neches	R. R.	Troupe	R. R. 465
Oakwoods.....	R. R.	Union Hill	542
Ojo Escondido		Van Alstyne	803
Overton	R. R.	Waco	395
Paige		Webberville	394
Peach Creek		Wellborn	323

Indian Territory.

Atoka.....	574	Fort Washita.....	645
Caddo.....	723	Kingfisher.....	950
Choteau Station.....	646	McAllister.....	702
Fort Arbuckle.....	1,000	Perryville.....	528
Fort Gibson.....	560	Verdigris.....	480
Fort Towson.....	300		

Kansas.

Abilene.....	R. R.	1,173	Carbondale	1,089
Americus.....		1,177	Carlyle.....	R. R. 3,064
Ames.....		790	Chapman Creek	R. R. 1,132
Armstrong.....	R. R.	673	Chetopa	851
Atchison.....	R. R.	810	Cheyenne Wells	4,179
Aubrey.....		3,135	Cimarron	2,655
Avon.....		775	Cirleville	R. R. 1,124
Axtel.....	R. R.	1,371	Clinton	762
Baldwin City.....		947	Cottonwood	1,192
Barnard.....		687	Council Grove	1,000
Bavaria.....	R. R.	1,289	Coyote	R. R. 2,608
Baxter Springs.....		817	Cumming	1,015
Beattie.....	R. R.	1,302	Detroit	R. R. 1,153
Belleville.....	R. R.	1,544	Eagle Tail	R. R. 3,452
Belvoir.....		777	Edoardsville	R. R. 801
Blackwolff.....	R. R.	1,583	Ellinwood	1,759
Brookville.....	R. R.	1,366	Ellis	R. R. 2,135
Bwick Creek.....		748	Ellsworth	R. R. 1,556
Buffalo.....	R. R.	2,793	Elm Creek	R. R. 1,586
Bunker Hill.....	R. R.	1,882	Elwood	775
Burlingame.....		800	Emporia	1,169
Camp Cirley.....		2,106	Fairfield	1,744

Kansas—Continued.

Cities, Towns, &c.	Eleva- tion.	Cities, Towns, &c.	Eleva- tion.
	<i>Feet.</i>		<i>Feet.</i>
Fairbury	R. R. 1,324	Ogallah	R. R. 2,385
Fall Leaf	R. R. 827	Ogden	R. R. 1,078
Florence	1,363	Osage Mission	1,000
Fort Atkinson	2,330	Paola	875
Fort Harker	R. R. 1,600	Pardoe	1,155
Fort Hays	2,019	Parker	921
Fort Leavenworth	896	Park's Fort	R. R. 2,463
Fort Riley	R. R. 1,090	Parson's	366
Fort Scott	1,000	Perryville	R. R. 870
Fort Wallace	3,203	Pierceville	2,800
Fort Zarah	1,870	Pond Creek	R. R. 3,291
Fossil	R. R. 1,850	Raymond	1,699
Frankfort	1,394	Reading	1,082
Gardner	800	Red Vermillion	R. R. 1,054
Godfrey	5,505	Richland	807
Gopher	R. R. 3,336	Ridgeway	903
Grantville	R. R. 895	Rockspring	R. R. 1,459
Grasshopper	908	Rossville	R. R. 951
Great Bend	4,226	Russell	1,734
Grinnell	R. R. 2,922	Ryan	R. R. 900
Hamlin	R. R. 991	Sabetha	R. R. 1,316
Hanover	R. R. 1,236	St. Francis	906
Hartford	1,106	St. George	R. R. 1,018
Hays	R. R. 2,009	St. Mary's	R. R. 973
Hepler	1,112	Salina	R. R. 1,243
Hiawatha	R. R. 1,102	Sand Springs Tank	R. R. 1,164
Hollenburg	R. R. 1,267	Sargent	3,425
Horton	1,204	Secondine	R. R. 809
Humboldt	954	Seneca	R. R. 1,162
Hutchinson	1,500	Severance	R. R. 910
Iola	854	Sheridan	R. R. 3,121
Junction City	R. R. 1,100	Sherlock	2,925
Labelle	883	Sigel	753
La Cygne	725	Silver Lake	R. R. 933
Ladore	928	Skiddy	1,245
Larned	2,021	Solomon City	R. R. 1,193
Lawrence	R. R. 846	State Line	R. R. 764
Leavenworth, high wat'r Mo.riv. R.R. " low wat'r Mo.riv. (city datum)	R. R. 789	Steele City	R. R. 1,277
Lecompton	764	Stranger	R. R. 807
Lenape	825	Summit Siding	R. R. 1,672
Louisville	R. R. 799	Syracuse	3,247
Manhattan	R. R. 1,014	Tecumseh	1,234
Manville	R. R. 1,042	Tiblow	R. R. 811
Marysville	R. R. 980	Topeka	R. R. 904
Medina	R. R. 1,164	Vermillion Tank	R. R. 1,099
Meriden	871	Wakarusa	R. R. 989
Monotony	R. R. 993	Walker	R. R. 930
Monument	R. R. 3,792	Wallace	R. R. 1,962
Muncy Siding	R. R. 3,199	Wamego	R. R. 3,319
Netawaka	R. R. 685	Washington	R. R. 1,018
New Chicago	R. R. 1,148	Wathena	R. R. 1,324
Newman	933	Wild Horse	R. R. 824
Newton	R. R. 879	Williamstown	R. R. 4,340
North Fork Bend	R. R. 1,448	Williamsville	R. R. 915
Norway	R. R. 1,946	Wilson	R. R. 869
	1,049	Wyandotte	R. R. 1,702
			707

Nebraska.

Cities, Towns, &c.	Eleva-tion.	Cities, Towns, &c.	Eleva-tion.		
Alexandria.....	R. R.	<i>Feet.</i>			
Alkali.....	R. R.	1,416	Jefferson.....	R. R.	2,087
Antelope.....	R. R.	3,076	Julesburgh.....	R. R.	3,538
Ashland.....	R. R.	4,750	Juniata.....	R. R.	1,978
Barton.....		1,091	Kearney.....	R. R.	2,144
Belvidere.....	R. R.	3,421	Kearney Junction.....	R. R.	2,157
Big Spring.....	R. R.	1,509	Kenesaw.....	R. R.	2,057
Brady Island.....	R. R.	3,363	Ketchum.....		1,272
Brownson.....		2,675	Lincoln.....	R. R.	1,154
Brulé.....	R. R.	4,200	Lockwood.....		1,800
Bushnell.....	R. R.	3,304	Lodgepole.....	R. R.	3,838
Carlton.....	R. R.	4,898	Lone Tree.....	R. R.	1,724
Cayote.....	R. R.	1,562	Louisville.....	R. R.	1,029
Chapman's.....	R. R.	2,478	Lowell.....	R. R.	2,074
Chappel.....		1,798	McPherson.....	R. R.	2,735
Clark's.....	R. R.	5,702	Nebraska City.....		1,005
Coleraine.....		1,648	Newcastle.....		800
Colton.....		1,518	Newton.....	R. R.	1,141
Columbus.....	R. R.	4,042	Nichols.....	R. R.	2,920
Concord.....		1,470	North Bend.....	R. R.	1,297
Crete.....	R. R.	752	North Platte.....	R. R.	2,827
Davenport.....	R. R.	1,360	Nursery Hill.....		1,266
Denton.....	R. R.	1,668	O'Fallon.....	R. R.	3,014
Dewitt.....		1,238	Ogalalla.....	R. R.	3,228
Dexter.....		1,255	Omaha, low water Mo. riv.....		978
Dorchester.....	R. R.	3,000	" high water Mo. riv.....		997
Eden.....	R. R.	1,493	Omaha (Depot).....	R. R.	1,060
El Dorado.....		1,737	Omaha Junction.....	R. R.	989
Elkhorn.....	R. R.	1,692	Overton.....	R. R.	2,343
Elm Creek.....	R. R.	1,188	Papillion.....	R. R.	1,010
Fairbury.....	R. R.	2,279	Pawnee.....	R. R.	1,945
Fairfield.....	R. R.	1,324	Pine Bluff.....	R. R.	5,064
Fairmount.....	R. R.	1,788	Pioneer Grove.....		1,400
Falls City.....		1,648	Plattsmouth.....	R. R.	972
Fontenelle.....		806	Plum Creek.....	R. R.	2,408
Fort Calhoun.....		1,000	Potter.....	R. R.	4,408
Fort Clarke.....		1,327	Red Cloud.....		1,650
Fort Kearney.....	R. R.	1,876	Richland.....		1,350
Fort McPherson.....		2,130	Rock Bluff.....		1,100
Fremont.....	R. R.	2,693	Rogers.....		1,359
Gannett.....		1,214	Roscoe.....	R. R.	3,143
Georgetown.....	R. R.	2,752	Salem.....		817
Gibbon.....	R. R.	1,852	Schuyler.....	R. R.	1,373
Gilmore.....	R. R.	2,084	Sidney.....	R. R.	4,111
Glendale.....		1,014	Silver Creek.....	R. R.	1,572
Grafton.....	R. R.	1,300	South Bend.....	R. R.	991
Grand Island.....	R. R.	1,704	Stevenson.....	R. R.	2,208
Greenwood.....	R. R.	1,798	Summit Siding.....	R. R.	1,180
Harvard.....	R. R.	1,130	Table Rock.....		932
Hastings.....	R. R.	1,807	Tecumseh.....		1,015
Herman.....		1,944	Valley.....	R. R.	1,158
Highland.....	R. R.	1,067	Warren.....	R. R.	2,608
Idaho.....	R. R.	1,419	Washington.....		1,025
Inland.....	R. R.	2,011	Waverley.....	R. R.	1,126
Ionia.....		1,887	Willow Island.....	R. R.	2,549
Jackson.....	R. R.	3,000	Wood River.....	R. R.	2,012
		1,508			

Dakota.

Cities, Towns, &c.	Eleva-tion.	Cities, Towns, &c.	Eleva-tion.
	<i>Feet.</i>		<i>Feet.</i>
Bois des Sioux.....	1,039	Fort Sully.....	1,398
Elk Point.....	1,180	Fort Union.....	1,970
Fort Berthold.....	1,873	Fort Wadsworth.....	1,896
Fort Buford.....	2,017	Richland.....	1,247
Fort Clarke.....	1,827	Square House.....	2,120
Fort Pierre.....	1,558	Vermillion.....	1,200
Fort Randall.....	1,245	Yankton Agency.....	1,900
Fort Ransom.....	1,438		

New Mexico.

Abiquin.....	6,500	Jemez.....	5,629
Aqua Fria.....	7,757	Lagoma.....	6,000
Alamosa.....	4,200	Laguna Colorado.....	4,586
Albuquerque.....	5,032	Laguna de los Caballos.....	7,615
Anton Chico.....	5,414	Las Vegas.....	6,418
Atrisco.....	5,033	Le Jarra.....	6,942
Bent's Cañon Ranche.....	4,820	Loma.....	7,000
Biyendante.....	5,406	Loma Parda.....	6,393
Cebolleta.....	6,200	Ojo del Pescado.....	6,551
Covero.....	5,880	Old Zuni.....	7,414
Elizabethtown.....	8,200	Payanda.....	4,833
El Moro.....	7,238	Pecos Village.....	6,366
El Paso.....	3,940	Peña Blanca.....	5,289
El Rito.....	5,784	Quelettes.....	5,193
Fort Bascom.....	3,726	Rayado.....	6,946
Fort Bayard.....	4,450	Remances.....	6,185
Fort Conrad.....	4,576	San Antonio.....	6,409
Fort Craig.....	4,576	Sandia.....	5,056
Fort Cummings.....	5,126	San Domingo.....	5,100
Fort Defiance.....	6,500	San Felipe.....	5,171
Fort Fillmore.....	3,937	Santa Clara.....	6,511
Fort Marcy.....	6,846	Santa Fé.....	7,047
Fort McRae.....	4,500	Sheep Springs.....	5,310
Fort Stanton.....	5,000	Socorro.....	4,560
Fort Taos.....	8,000	Taos.....	8,000
Fort Thorn.....	4,500	Trinidad.....	5,725
Fort Union.....	6,670	Village of the Vegas.....	6,418
Fort Webster.....	6,350	Whetstone.....	6,360
Fort Wingate.....	6,649	Zandia.....	5,056
Isleta.....	4,768	Zuni.....	6,355

Colorado.

Acequia.....	R. R.	5,529	Box Elder.....	R. R.	5,546
Agate.....	R. R.	5,476	Breckenridge.....		9,492
Alma.....		10,868	Camp Loma.....		8,069
Arapahoe.....	R. R.	4,024	Cañon City.....		5,494
Aroya.....	R. R.	4,666	Caribou.....		9,167
Badito.....		6,530	Carlisle Springs.....	R. R.	4,952
Bent's Fort.....	R. R.	4,039	Carr Station.....		5,869
Bergen's Ranch.....		7,752	Cedar Point.....	R. R.	5,730
Berst's.....	R. R.	6,811	Central City.....		8,300
Bijou.....	R. R.	5,921	Cheyenne Wells.....	R. R.	4,295
Black Hawk.....		7,543	Christ Lake.....		7,186
Boonville.....	R. R.	4,497	Citadel.....	R. R.	6,122
Boulder.....		5,536	Colorado City.....		6,342

Colorado—Continued.

Cities, Towns, &c.	Eleva-tion.	Cities, Towns, &c.	Eleva-tion.	
	<i>Feet.</i>		<i>Feet.</i>	
Colorado Springs.....	R. R.	5,986	Kenosha House.....	9,840
Corlis Springs.....		5,975	Kiowa.....	5,514
Dayton.....		9,265	Kit Carson.....	4,307
Deer Trail.....	R. R.	5,203	Labran.....	5,182
Denver.....	R. R.	5,196	Lake.....	5,319
Denver Pacific Junction.....	R. R.	5,211	Larkspur.....	6,665
Divide.....	R. R.	7,208	Las Animas.....	3,967
Douglas.....	R. R.	6,324	Little Buttes.....	5,170
Dudley.....	R. R.	10,435	Littleton.....	5,361
Empire.....		8,583	Manitou, rock around Manitou	
Eureka.....	R. R.	4,263	spring.....	6,297
Evans.....		4,745	Masonville.....	6,960
Fairplay.....	R. R.	9,964	Meadows.....	4,801
Fall River.....		7,526	Middle Boulder.....	8,067
First View.....	R. R.	4,595	Mill City.....	7,826
Fort Collins.....		4,815	Mirage.....	4,859
Fort Garland.....		7,681	Missouri City.....	9,073
Fort Lupton.....		5,027	Montezuma.....	10,113
Fort Lyon.....		3,874	Montgomery.....	11,005
Fort Massachusetts.....		8,365	Monument.....	6,354
Fort Morgan.....		4,500	Mosca.....	7,950
Fort Reynolds.....		4,500	Mount Vernon.....	6,421
Fort Sedgwick.....		3,600	Nevada City.....	8,800
Fountain.....	R. R.	5,562	Old Oro.....	10,071
Georgetown.....		8,412	Oro City.....	10,528
Godfrey.....	R. R.	5,621	Pierce Station.....	5,107
Golden City, city and railroad directrix.....	R. R.	5,729	Plattville.....	4,960
Gold Hill.....		8,600	Plum.....	5,834
Granite.....		8,707	Pueblo (north).....	R. R.
Grant.....	R. R.	8,587	Pueblo (south).....	R. R.
Greeley.....		4,779	River Bend.....	R. R.
Greenland.....	R. R.	6,927	Saguache.....	7,632
Hamilton.....		9,567	St. Charles.....	5,130
Henry's.....	R. R.	6,983	St. John's.....	10,625
Hermisillo.....		4,723	St. Vrains.....	5,256
Hot Springs.....		7,725	Salt Works.....	8,826
Huerfano Junction.....		4,563	Schuylar.....	R. R.
Hughes.....		5,070	Spring Valley.....	5,354
Hugo.....	R. R.	5,068	Swallow's Nest.....	6,647
Huntsville.....		6,770	Tarryall.....	R. R.
Husted's.....	R. R.	6,599	Valley Station.....	4,860
Idaho.....		7,330	Widefield.....	10,078
Jefferson.....		9,692	Wild Horse.....	R. R.
Johnson Station.....		5,006	Wild Horse Spring.....	R. R.
			Wood Valley.....	4,456
				4,330
				5,533

Wyoming.

Archer.....	R. R.	6,038	Carbon.....	R. R.	6,760
Aspen.....	R. R.	7,825	Carter.....	R. R.	6,535
Atlantic City.....		7,666	Cheyenne.....	R. R.	6,075
Baxter.....		6,300	Church Buttes.....	R. R.	6,303
Big Pond Stage Station.....		6,541	Como.....	R. R.	6,692
Bitter Creek.....	R. R.	6,681	Cooper's Lake	R. R.	7,062
Black Buttes.....	R. R.	6,595	Creston.....	R. R.	7,030
Boleter.....		4,325	Dana.....	R. R.	6,882
Bridger.....	R. R.	6,760	Deer Creek Agency.....		5,000
Bryan.....	R. R.	6,328	Egbert.....	R. R.	5,310
Buford.....	R. R.	7,810	Fillmore.....		6,885

Wyoming—Continued.

Cities, Towns, &c.	Eleva- tion.	Cities, Towns, &c.	Eleva- tion.
	<i>Feet.</i>		
Fort Bridger.....	6,215	Millis.....	6,790
Fort Fetterman.....	5,012	Miser.....	6,824
Fort Halleck.....	7,800	Otto.....	6,756
Fort Laramie.....	4,519	Pacific Springs.....	7,144
Fort Phil. Kearney.....	6,000	Percy.....	6,958
Fort Sanders.....	R. R.	Piedmont.....	6,528
Fort Stambaugh.....	7,185	Pine Bluffs.....	5,026
Fort Steele.....	R. R.	Point of Rocks.....	6,484
Gilbert's Trading Post.....	7,400	Rawlins.....	6,735
Granite Cañon.....	R. R.	Red Buttes.....	7,360
Granger.....	R. R.	Red Desert.....	7,708
Green River.....	R. R.	Rock Creek.....	6,703
Greenville.....	R. R.	Rock Springs.....	6,272
Hallville.....		St. Mary's.....	6,757
Hampton.....		Salt Wells.....	6,353
Harney.....	R. R.	Separation.....	6,901
Hazard.....	R. R.	Sherman.....	8,271
Hillsdale.....	R. R.	Simpson.....	6,907
Howell.....		South Pass City.....	7,857
Independence Rock.....		Sulphur Springs.....	7,690
Laramie.....	R. R.	Sweetwater Bridge.....	7,000
Latham.....		Table Rock.....	6,887
Lawrence.....		Three Crossings.....	6,134
Leroy.....	R. R.	Walcott's.....	6,800
Lookout.....	R. R.	Washakie.....	6,697
Marston.....		Wilcox.....	7,033
Medecine Bow.....	R. R.	Wyoming City.....	7,087

Montana.

Argenta.....	6,337	Fort Ellis.....	4,935
Bannack.....	5,896	Fort Owen.....	3,284
Beaverhead.....	4,464	Fort Shaw.....	6,000
Beavertown.....	4,942	Gallatin City.....	4,132
Bighorn City.....	2,831	Helena.....	4,266
Blackfoot Agency.....	3,169	Jefferson City.....	4,776
Boteler's Ranch.....	4,825	Missoula.....	3,900
Bouldertown.....	5,000	Montana City.....	4,191
Bozeman.....	4,900	Sheridan.....	5,221
Cantonment Jordan.....	2,990	Virginia City.....	5,824
Deer Lodge.....	4,654	Whitehall.....	4,639
Fort Benton.....	2,780		

Arizona.

Anvil Rock.....	5,170	Fort Whipple.....	5,700
Aubrey City.....	398	Hualpais Spring.....	4,258
Big Cañon.....	1,426	Leroux Spring.....	7,373
Camp Date Creek.....	3,726	Navajo Spring.....	5,626
Camp McPherson.....	3,726	Peacock Spring.....	3,170
Camp Skull Valley.....	5,000	Pearl Spring.....	5,315
Colorado Chiquito.....	4,773	Saccaton.....	1,066
Fort Buchanan.....	5,330	Truxton Springs.....	3,783
Fort Canby.....	6,500	Tubac.....	3,000
Fort Mojave.....	604	Val de Chino.....	5,754
Fort Rock Spring.....	4,972	Yampa Junction.....	5,369

Utah.

Cities, Towns, &c.	Eleva-tion.	Cities, Towns, &c.	Eleva-tion.
American Fork.....	4,596	Kanara.....	5,449
Beaver.....	5,927	Kelton.....	R. R. 4,500
Blue Creek.....	R. R. 4,360	Lake.....	4,223
Bonneville.....	R. R. 4,310	Lehi.....	4,584
Bennington.....	5,798	Logan.....	4,557
Bovine.....	4,347	Lucin.....	R. R. 4,400
Brigham City.....	4,236	Matlin.....	R. R. 4,821
Buckhorn Spring.....	5,688	Mill Spring.....	6,504
Camp Douglass.....	4,800	Montpelier.....	5,793
Camp Floyd.....	4,860	Monument.....	R. R. 4,290
Castle Rock.....	R. R. 6,282	Mount Pleasant.....	5,875
Cedar City.....	5,726	Nephi.....	4,938
Centreville.....	4,233	Oak Creek.....	5,158
Circleville.....	5,624	Ogden.....	R. R. 4,303
Copenhagen.....	4,999	Paragoonah.....	6,222
Corinne.....	R. R. 4,294	Parowan.....	5,910
Cottonwood.....	4,200	Payson.....	4,541
Deseret City.....	4,642	Promontory.....	R. R. 4,943
Devil's Gate.....	R. R. 4,835	Provo.....	4,363
Draper.....	4,511	Richmond.....	4,641
Echo.....	R. R. 5,507	Rozel.....	R. R. 4,600
Ephraim.....	5,633	St. Mary's.....	6,200
Evanston.....	R. R. 6,870	Salt Lake City.....	4,320
Fairfield.....	4,866	Session Settlement.....	4,183
Farmington.....	4,296	Silver City.....	6,369
Faust Station.....	5,296	Smithfield.....	4,616
Fillmore.....	6,025	Terrace.....	R. R. 4,450
Fish Spring.....	4,269	Uintah.....	R. R. 4,524
Fort Crittenten.....	4,860	Wahsatch.....	R. R. 6,870
Franklin.....	4,552	Wanship.....	6,200
Gunnison.....	5,144	Weber.....	R. R. 5,096
Hanging Rock.....	5,974	Wellsville.....	4,568
Hebron.....	5,474	Willard City.....	4,350
Hyde Park.....	4,553	Willow Spring.....	4,421
Iron City.....	6,099		

Idaho.

American Falls.....	4,320	Lapway.....	2,000
Cantonment Loring.....	4,700	Malade City.....	4,700
Cœur d'Alène Mission.....	2,280	Market Lake.....	4,795
Florence.....	8,000	Salmon City.....	4,030
Fort Boise.....	2,100	Soda Springs.....	5,738
Fort Hall.....	4,754	Taylor's Bridge.....	4,627

Nevada.

Argenta.....	R. R. 4,575	Carson City.....	4,720
Austin.....	6,451	Cedar.....	5,976
Battle Mountain.....	R. R. 4,534	Clark's.....	R. R. 4,290
Be-o-wa-we.....	R. R. 4,717	Clifton.....	6,339
Bishop.....	5,423	Cluro.....	4,785
Brown's.....	R. R. 3,955	Cottonwood Springs.....	3,449
Butterfield Springs.....	5,324	Coyote.....	2,440
Camp Halleck.....	5,600	Crystal Spring.....	4,718
Camp McDermot.....	4,700	Dayton.....	4,490
Camp McGarry.....	6,000	Deeth.....	5,340
Carlin.....	R. R. 4,930	Elko.....	R. R. 5,030

Nevada—Continued.

Cities, Towns, &c.	Eleva- tion.	Cities, Towns, &c.	Eleva- tion.
	<i>Feet.</i>		<i>Feet.</i>
Fort Churchill.....	4,284	Pioche.....	5,942
Fort Ruby.....	5,922	Raspberry.....	4,354
Golconda.....	R. R.	Reno.....	4,525
Halleck.....	R. R.	St. Thomas.....	1,600
Hiko.....	5,220	San Juan.....	8,075
Homer.....	3,881	Shoshone.....	4,665
Hot Springs.....	5,823	Star City.....	7,500
Humboldt.....	R. R.	Stone House.....	4,449
Independence.....	4,262	Tecoma.....	4,600
Indian Springs.....	6,115	Toano.....	5,964
Kingston.....	3,402	Tulasco.....	5,418
Las Vegas.....	6,247	Tule.....	4,315
Loray.....	2,074	Tule Springs.....	2,366
Lovelock's.....	R. R.	Union.....	6,160
Lyonsville.....	4,100	Verdi.....	4,915
Moleen.....	5,401	Virginia City.....	6,200
Montello.....	R. R.	Vista.....	4,400
Nevada City.....	5,000	Wadsworth.....	4,104
Oreana.....	4,800	Wells.....	5,650
Osino.....	6,205	West Point.....	1,755
Palisade.....	R. R.	White Plains.....	3,921
Pequop.....	4,206	Winnemucca.....	4,355
	5,100		
	4,841		
	6,180		

California.

Acampo	59	Dutch Flat	R. R.	3,425
Alta	R. R.	Elk Grove		53
Altamont	3,625	Ellis		75
Anaheim	740	Emigrant Gap	R. R.	5,300
Anderson	262	Eureka		5,223
Anita	433	Florin		42
Arcade	161	Folsom City		180
Auburn	R. R.	Fort Bidwell		4,680
Aurora	1,357	Fort Crook		3,390
Baker's Ranch	7,468	Fort Humboldt		50
Banta	3,285	Fort Jones		2,570
Battle Hill	30	Fort Miller		402
Benicia	2,389	Fort Reading		596
Berenda	R. R.	Fort Ross		50
Blue Cañon	64	Fort Tejon		3,240
Boca	R. R.	Fort Yuma		180
Borden	256	Fresno		292
Bronco	5,533	Georgetown		2,433
Camp Babbitt	172	Gilroy		193
Camp Far West	5,341	Gold Run	R. R.	3,245
Camptonville	175	Goshen		286
Camp Union	2,388	Grass Valley		2,090
Capitan Grande	54	Gridley		97
Carizzo	730	Hamilton		260
Cascade	431	Hollister		284
Chico	6,541	Hooker		543
Cisco	193	Hubertville		980
Clayton	R. R.	Illinoistown		2,234
Colfax	5,911	Independence		4,800
Colona	76	Jackson		934
Columbia	3,448	Junction	R. R.	189
Cottonwood	835	Keysville		2,558
Decoto	2,314	Kingston		1,118
Downieville	423	Lanes		2,664
Drum Barracks	68	Lathrop		48
	2,200			
	32			

California—Continued.

Cities, Towns, &c.	Eleva-tion.	Cities, Towns, &c.	Eleva-tion.
Latrobe	771	San Buenaventura	12
Lawrence	66	San Diego	30
Lincoln	161	San Felipe	2,456
Livermore	R. R.	San Fernando Mission	1,043
Lone Pine	520	San Francisco	R. R.
Los Angeles	3,917	San Jose	R. R.
Macon	250	San Leandro	48
Marion	450	San Lorenzo	35
Mail Spring	74	San Luis Obispo	402
Martin's	3,793	San Luis Rey	20
Marysville	1,982	San Miguel	616
Mayfield	80	San Pascual	716
Melrose	34	San Pedro	30
Merced	18	San Raphael	0
Mesquite Wells	171	Santa Barbara	20
Midway	3,672	Santa Catalene	3,000
Mineral Bar	351	Santa Clara	98
Modesto	1,121	Santa Isabella	3,050
Monte	91	Santa Isabella Rancho	2,957
Monterey	354	Scheffler's Hot Springs	4,094
Montezuma	140	Shaw's Flat	2,270
Nevada	1,787	Sheridan	113
Newcastle	2,573	Shingle Springs	1,422
Niles	R. R.	Soledad	3,213
Oakland	920	Sonora	1,971
Pajara	148	Soto	186
Paradise	123	Stockton	R. R.
Penryn	22	Strawberry Valley	46
Pino	125	Sunoe	3,710
Pleasanton	624	Sutler	964
Placerville	403	Sycamore	919
Plainsburg	3,153	Tah-ee-chap-pi	302
Quiqual-mingo	2,109	Tamarac	4,017
Quincy	209	Tassett	6,209
Rawson	1,084	Tehama	83
Red Bluff	500	Tipton	222
Redding	228	Trinidad	275
Redwood City	566	Truckee	R. R.
Rincon	10	Tulare	5,866
Roble	2,050	Tullock	290
Rocklin	179	Vacaville	106
Rock Spring	R. R.	Vallejo	175
Sacramento	269	Vina	0
Sackett's Wells	4,898	Warner's Ranch	211
Salinas City	82	Wheatland	3,022
San Benito	312	Yankee Jim's	84
San Bernardino	42	Yreka	3,185
San Bruno	140		4,000
	1,118		
	16		

Oregon.

Albany	600	Fort Umpqua	8
Auburn	3,300	Lapwai	1,000
Dalles	200	Oregon City	200
Eola	500	Portland	150
Fort Dalles	350	Port Orford	50
Fort Klamath	4,200	Salem	382
Fort Lane	2,000	Wallamet	120
Fort Okanagon	810		

Washington.

Cities, Towns, &c.	Eleva- tion.	Cities, Towns, &c.	Eleva- tion.
	<i>Feet.</i>		<i>Feet.</i>
Camp Pickett.....	150	Fort Townsend	135
Camp Semiahmoo	11	Fort Vancouver.....	50
Cantonment Stevens.....	3,412	Fort Walla Walla	1,396
Fort Bellingham	88	Kalama	45
Fort Cascades.....	50	Olympia	300
Fort George	100	Steilacoom.....	1,300
Fort Steilaeoom.....	300	Vancouver.....	0

R. R. indicates that the elevation was determined by railroad levels, and is the level of the track at the railroad station.

TABLE II.

MOUNTAINS IN THE UNITED STATES.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas'm'nt.	Elevation.
Mt. Adams	White	N. H	Toner's Dict. of El.	Feet.	5,794
Mt. Adams	Cascade	W. T	Vansant		13,258
Same .....	.....	.....	Peterman's map		9,570
Mt Agamenticus .....	.....	Me	Toner's Dict. of El.		673
Mt. Alexander	Alleghanies	N. C	Guyot—Am. Jour.		6,447
Mt. Antoro	Sawatch	Colo	Hayden	b	14,245
Mt. Baker	Cascade	W. T	Peterman's map		11,100
Same .....	.....	.....	U. S. Coast Survey	b	10,760
Bald Mt.	Alleghanies .....	.....	Guyot		5,550
Mt. Baldy .....	.....	Utah	Engineer Corps		11,730
Mt. Balley .....	.....	Cal .....	.....		6,357
Balsam Cone	Alleghanies .....	.....	Guyot		6,671
Bear Butte	Black Hills	Dak	Peterman's map		3,500
Mt. Bechler	Wahsatch	Utah	Hayden	a	9,716
Mt. Belknap .....	.....	Utah	Engineer Corps		11,894
Bergen Peak	Colorado	Colo	Hayden	a	9,555
Big Craggy Mt.	Alleghanies .....	.....	Guyot		6,090
Big Stone Mt.	Alleghanies .....	.....	Guyot		5,614
Mt. Blackmore	Rocky	Mont	Hayden	b	10,134
Black Brother	Alleghanies .....	.....	Guyot		6,619
Blackstock Knob	Alleghanies .....	.....	Guyot		6,380
Blue Mt. ....	.....	N. H	Guyot		4,370
Bowlen's Pyramid	Alleghanies .....	.....	Guyot		6,348
Mt. Brewer	Sierra Nevada	Cal	Whitney	b	13,886
Briderger's Peak	Rocky	Mont	Hayden	b	9,002
Mt. Buckley	Alleghanies	N. C	Guyot		6,599
Buckskin Mt.	Park	Colo	Hayden	a	14,296
Buffalo Peak	Park	Colo	Hayden	b	13,541
Bull's Head	Alleghanies .....	.....	Guyot		5,935
Bunker Hill (north p'k) .....	.....	Nev	King		11,735
Bunker Hill (south p'k) .....	.....	Nev	King		11,602
Mt. Byers	Rocky	Colo	Hayden	b	12,778
Cameron's Cone	Colorado	Colo	Hayden	t	11,460
Camel Hump	Green	Vt	Guyot		4,088
Mt. Canby .....	.....	Colo	Ruffner	b	13,100
Cannon Mt. ....	.....	N. H	Guyot		3,850
Capitol	Elk	Colo	Hayden	t	13,992
Mt. Carlos	Coast	Cal	Whitney	b	4,977
Carraigain Mt. ....	.....	N. H	Guyot		4,678
Carr's Mt. ....	.....	N. H	Guyot		3,480
Mt. Carter	White	N. H	Guyot		4,830
Castle Peak	Elk	Colo	Hayden	b	14,106
Castle Peak	Sierra Nevada	Cal	Peterman's map		13,000
Cattail Peak	Alleghanies .....	.....	Guyot		6,611
Charleston Peak .....	.....	Nev	Peterman's map		10,874
Checolsum Mt.	Cascade	W. T	Peterman's map		5,706
Cheyenne Mt.	Colorado	Colo	Hayden	t	9,948
Chicorira Mt.	White	N. H	Guyot		3,540
Chief	Colorado	Colo	Hayden	b	11,833
Chilhowee Mt.	Alleghanies .....	.....	Guyot		2,452
Chimney Peak	Alleghanies .....	.....	Guyot		6,244
Chimzy Knob	Alleghanies .....	.....	Guyot		5,588
Chuehulum Mt.	Cascade	W. T	Peterman's map		11,700
Mt. Clay	White	N. H	Guyot		5,553
Clingman's Mt	Alleghanies .....	.....	Guyot		6,707

Mountains in the United States—Continued.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas'n't.	Elevation.
Clingman's Dome	Alleghanies		Guyot	Feet.	6,660
Mt. Clinton	White		Guyot		4,320
Cloud Peak	Rocky	Mont	Peterman's map		7,300
Cockscomb Mt	Alleghanies		Guyot		5,426
Cold Mt.	Alleghanies		Guyot		6,063
Cold Spring Mt.	Alleghanies		Guyot		5,915
Mt. Collins	Alleghanies	Tenn	Guyot		6,1 ¹ 8
Corner Knob	Alleghanies		Guyot		5,246
Craggy Pinnacle	Alleghanies		Guyot		5,945
Crawford Mt.	White	N. H.	Guyot		3,154
Crestones	Sangre de Cristo	Colo.	Hayden		14,233
Cross Knob	Alleghanies	Tenn	Guyot		5,931
Mt. Curtis	Alleghanies	Tenn	Guyot		6,568
Mt. Dana	Sierra Nevada	Cal.	Whitney	b	13,277
Mt. Davidson	Nev	King			7,827
Dawes Peak	Uintas	Utah	Peterman's map		13,300
Deer Mt.	Alleghanies		Guyot		6,233
Mt. Delano		Mont	Hayden	b	10,200
Monte Diablo	Coast	Cal.	Whitney	b	3,856
Mt. Doane	Rocky	Wyo	Hayden		10,118
Double Mt.		Tex.	Peterman's map		3,824
Double Spring Mt	Alleghanies		Guyot		6,380
"E"	Elk	Colo.	Hayden	t	13,174
Echo Mt.	White	N. H.	Guyot		3,170
Mt. Elbert	Sawatch	Colo.	Hayden	a	14,324
Electric Peak	Rocky	Mont	Hayden	b	10,992
Mt. Ellis	Rocky	Mont	Hayden	b	8,419
Emigrant Peak	Rocky	Mont	Hayden	a	10,629
Mt. Emma		Nev	King		6,546
Engineer Mt.		Colo.	Ruffner	b	13,266
Engle Peak	Rocky	Mont	Peterman's map		7,500
Equinox Mt.		Vt	Guyot		3,872
Mt. Evans	Colorado	Colo.	Hayden	b	14,330
Fisher's Peak	Raton	Colo.			7,759
Flat Mt.	Rocky	Wyo	Hayden	b	9,704
Mt. Flora	Rocky	Colo.	Parry	b	12,878
Mt. Franklin	White	N. H.	Guyot		4,904
Fremont's Peak	Rocky	Wyo	Fremont	b	13,570
Galena Mt.		Colo.	Ruffner	b	12,978
Mt. Garfield	Rocky	Idaho	Hayden	b	9,704
Gass Mt.		Nev	Peterman's map		6,200
Geneva Peak		Nev	King		10,994
Mt. Gibbs	Alleghanies		Guyot		6,591
Gilbert's Peak	Uintas		King		13,250
Globe Peak		Nev	King		11,237
Gothic Mt.	Elk	Colo.	Hayden	t	12,498
Grandfather Mt	Alleghanies		Guyot		5,897
Grafton Peak		Nev	Engineer Corps		10,964
Graybeard	Alleghanies		Guyot		5,448
Graylock		Mass	Guyot		3,505
Gray's Peak	Rocky	Colo.	Hayden	b	14,341
Same			Whitney	b	14,145
Great Bald Mt.	Alleghanies		Guyot		4,722
Great Frog Mt.	Alleghanies	Tenn	Guyot		4,226
Great Hogback	Alleghanies		Guyot		4,792
Greenhorn Mt.	Wet	Colo.	Hayden	b	12,230
Grizzly Peak	Sawatch	Colo.	Hayden	b	13,962
Mt. Guyot	Alleghanies	Tenn	Guyot		6,636
Mt. Guyot	Rocky	Colo.	Parry	b	13,223
Same			Hayden	b	13,565
Hairy Bear	Alleghanies		Guyot		6,610

Mountains in the United States—Continued.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas'm't	Elevation.
Mt. Hamilton.....	Coast.....	Cal.....	Whitney.....	b	4,440
Hangover Mt	Alleghanies.....		Guyot.....	-	5,600
Mt. Harvard.....	Sawatch.....	Colo.....	Hayden.....	b	14,384
Same.....			Whitney.....	b	14,270
Hayden Peak.....	Uintas.....	Utah.....	Peterman's map	t	13,500
Mt. Hayden.....	Teton.....	Idaho.....	Hayden.....	t	13,858
Mt. Henry.....	Alleghanies.....	Vt.....	Guyot.....	-	6,373
Herrick Mt	Green.....		Guyot.....	-	2,692
High Pinnacle.....	Alleghanies.....		Guyot.....	-	5,690
Mt. Hodges.....	Uintas.....		King.....	-	13,500
Holy Cross.....	Sawatch.....	Colo.....	Hayden.....	t	14,176
Mt. Holyoke.....		Mass.....	Toner's Dict. of El.....	-	1,120
Mt. Hood.....	Cascade.....	W. T.....	Williamson.....	-	11,225
Hoosac Mt.....		Mass.....	Toner's Dict. of El.....	-	2,510
Mt. Hope.....		Ariz.....	Peterman's map	-	6,321
Horseshoe Mt.....	Park.....	Colo.....	Whitney.....	b	13,806
Huckleberry Knob.....	Alleghanies.....		Guyot.....	-	5,484
Hunt's Peak.....	Sangre de Cristo.....	Colo.....	Hayden.....	t	12,446
Inyan Kara.....	Black Hills.....	Wyo.....	Peterman's map	-	6,600
Italia Mt.....	Elk.....	Colo.....	Hayden.....	b	13,431
James' Peak.....	Colorado.....	Colo.....	Hayden.....	b	13,283
Mt. Jefferson.....	White.....	N. H.....	Guyot.....	-	5,714
Mt. Jefferson.....	Cascade.....	W. T.....	Humboldt (quoted)	-	15,500
Jumaleska.....	Alleghanies.....		Guyot.....	-	6,223
Mt. Katahdin.....		Me.....	Toner's Dict. of El.....	-	5,200
Mt. Kate.....		Nev.....	King.....	-	6,187
Mt. Kaweah.....	Sierra Nevada.....	Cal.....	Toner's Dict. of El.....	-	14,000
Mt. Kearsgage.....	White.....	N. H.....	Toner's Dict. of El.....	-	2,460
Killington Peak.....	Green.....	Vt.....	Guyot.....	-	4,221
Kinsman Mt.....		N. H.....	Guyot.....	-	4,200
Kioway Peak.....		Texas.....	Peterman's map	-	2,895
Mt. Lafayette.....	White.....	N. H.....	Guyot.....	-	5,290
La Plata Mt.....	Sawatch.....	Colo.....	Hayden.....	b	14,302
Laramie Peak.....		Wyo.....	Peterman's map	-	10,000
Lassen's Butte.....	Sierra Nevada.....	Cal.....	Whitney.....	b	10,577
Laurel Peak.....	Alleghanies.....		Guyot.....	-	5,922
Mt. Leconte.....	Alleghanies.....		Guyot.....	-	6,612
Lickstone Mt.....	Alleghanies.....		Guyot.....	-	5,707
Mt. Lincoln.....	Green.....	Vt.....	Guyot.....	-	4,078
Mt. Lincoln.....	Park.....	Colo.....	Whitney.....	b	14,124
Same.....			Hayden.....	t	14,297
Lone Peak.....		Utah.....	Peterman's map	-	10,713
Long's Peak.....	Colorado.....	Colo.....	Powell.....	b	14,050
Same.....			Hayden.....	b	14,271
Mt. Love.....	Alleghanies.....		Guyot.....	-	6,443
Lufter Knob.....	Alleghanies.....		Guyot.....	-	6,232
Mt. Lyell.....	Sierra Nevada.....	Cal.....	Whitney.....	b	13,217
Mt. Madison.....	White.....	N. H.....	Toner's Dict. of El.....	-	5,365
Mad River Peak.....	White.....	N. H.....	Guyot.....	-	4,397
Mt. Mansfield.....		Vt.....	Toner's Dict. of El.....	-	4,430
Mariposa Peak.....	Coast.....	Cal.....	Whitney.....	-	3,700
Maroon Mt.....	Elk.....	Colo.....	Hayden.....	t	14,000
Massive Mt.....	Sawatch.....	Colo.....	Hayden.....	t	14,368
Master Knob.....	Alleghanies.....	Tenn.....	Guyot.....	-	6,013
Mt. McClellan.....	Colorado.....	Colo.....	Hayden.....	t	13,423
Mt. McIntyre.....	Adirondacks.....	N. Y.....	Toner's Dict. of El.....	-	5,183
Mt. Mill.....	Elk.....	Colo.....	Ruffner.....	b	12,350
Mt. Mingus.....	Alleghanies.....		Guyot.....	-	5,694
Mt. Mitchell.....	Alleghanies.....		Guyot.....	-	6,582
Mt. Monadnock.....	White.....	N. H.....	Guyot.....	-	3,718
Moosehillock.....	White.....	N. H.....	Guyot.....	-	4,790

Mountains in the United States—Continued.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas'n't.	Elevation.
Mt. Moriah.....	White	N. H	Guyot.....	Feet.	4,653
Mud-creek Bald Mt.....	Alleghanies.....	Ga	Guyot.....		4,705
Mt. Munroe.....	White	N. H	Toner's Dict. of El.....		5,384
Mt. Nebo.....		Utah.....	Engineer Corps.....		11,992
Neighbor.....	Alleghanies.....	Tenn	Guyot.....		5,771
Mt. Ocona.....	Alleghanies.....	Nev	Guyot.....		6,135
Mt. Olcott.....		Mont	Engineer Corps.....		7,974
Old Baldy.....	Rocky.....	Hayden	b		9,711
Old Field Mt.....	Alleghanies.....	Guyot			5,100
Otter, Peaks of.....	Alleghanies.....	Va	Guyot		3,993
Mt. Ouray.....	Sawatch.....	Colo	Hayden		14,043
Owl's Head.....		N. H	Guyot		2,950
Panther Knob.....	Alleghanies.....		Guyot		5,359
Park Cone.....	Elk	Colo	Hayden		12,052
Parkview Mt.....	Rocky.....	Colo	Hayden		12,433
Parry's Peak.....			Parry		13,133
Peck's Peak.....	Alleghanies.....	N. H	Guyot		6,232
Mt. Pemigawasset.....			Guyot		4,420
Perry Knob.....	Alleghanies.....		Guyot		5,026
Picacho Mt.....		Ariz	Peterman's map		4,754
Pico Mt.....	Green	Vt	Guyot		3,954
Pike's Peak.....	Colorado.....	Colo	U. S. Signal Service	l	14,147
Same.....			Parry	b	14,216
Pilot Peak.....	Sierra Nevada.....	Cal	Peterman's map		7,500
Mt. Pinos.....	Coast	Cal	Peterman's map		9,500
Mt. Pisgah.....	Alleghanies.....		Guyot		5,757
Platte Mt.....	Colorado.....	Colo	Hayden	a	9,343
Mt. Pleasant.....	White	N. H	Guyot		4,764
Point of Rocks.....		Nev	King		9,610
Potatoe Top.....	Alleghanies.....		Guyot		6,393
Mt. Powell.....	Park	Colo	Hayden	t	13,398
Mt. Princeton.....	Sawatch.....	Colo	Hayden	b	14,199
Mt. Prometheus.....		Nev	King		8,256
Mt. Putnam.....	Portneuf	Idaho	Hayden	b	8,854
Quandary Peak.....	Park	Colo	Hayden	t	14,269
Mt. Rainier.....	Cascade	W. T	Coast Survey	b	14,444
Raven's Knob.....	Alleghanies.....		Guyot		6,230
Rawhide Peak.....		Wyo	Peterman's map		6,370
Mt. Ripley.....		Cal	Peterman's map		7,500
Mt. Rito Alto.....	Sangre de Cristo	Colo	Hayden		12,989
Roan Mt.....	Alleghanies.....		Guyot		6,306
Rockstand Knob.....	Alleghanies.....		Guyot		6,002
Rocky Trail Mt.....	Alleghanies.....		Guyot		6,488
Mt. Rosalie.....	Colorado.....	Colo	Hayden	t	14,340
Mt. Rose.....		Nev	King		6,448
Mt. Rowter.....		Colo	Ruffner	b	13,750
Mt. Safford.....	Alleghanies.....	Tenn	Guyot		6,535
Mt. St. Elias.....	Cascade	B. A	Malespina		17,854
Same.....			La Perouse		12,661
Same.....			Eng. Hydro. Charts		14,970
Mt. St. Helens.....	Cascade	W. T	Humboldt		15,500
Same.....			Peterman's map		9,750
Mt. San Antonio.....		Cal	Coast Survey	b	9,931
Mt. San Bernardino.....		Cal	Whitney	b	11,600
San Carlos Peak.....	Coast	Cal	Whitney	b	4,977
Mt. San Francisco.....		Ariz	Pacific R. R. Report		12,052
San Juan Peak.....		Nev	King		10,982
Mt. Shasta.....	Sierra Nevada.....	Cal	Whitney	b	14,442
Mt. Shavano.....	Sawatch.....	Colo	Hayden	b	14,093
Sheep Mt.....	Park	Colo	Hayden	a	13,432
Mt. Sheridan.....	Rocky.....	Wyo	Hayden	b	10,420

Mountains in the United States—Continued.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas'm'tn.	Elevation.
Shrewsbury Peak	Green	Vt.	Guyot.		Feet.
Mt. Silliman	Sierra Nevada	Cal.	Whitney	b	3,845
Mt. Silverheels	Park	Colo.	Whitney	b	11,623
Same			Hayden	b	13,650
Skalahum	Cascade	W. T.	Peterman's map		13,897
Skiotah	Rocky	Mont.	Peterman's map		7,400
Skomekan	Cascade	W. T.	Peterman's map		6,800
Snaky Mt.	Alleghanies.		Guyot.		8,400
Snow-Mass	Elk	Colo.	Hayden	b	5,195
Sopris' Peak	Elk	Colo.	Hayden	b	13,961
Standing Indian	Alleghanies.		Guyot.		12,972
Mt. Sugarloaf	Alleghanies.	Nev.	Guyot.		5,518
Mt. Sugarloaf			King		6,403
Table Mt.		N. H.	Guyot.		6,164
Tchopahk Mt.	Cascade	W. T.	Peterman's map		3,305
Teocali Mt	Elk	Colo.	Hayden	t	7,200
Thermometer Knob	Alleghanies.		Guyot.		13,274
Three Broth'rs(high'st)	Alleghanies.		Guyot.		6,157
Thunderhead	Alleghanies.		Guyot.		5,907
Thunder Knob	Alleghanies.		Guyot.		5,520
Mt. Tohkwano	Uintas	Utah	Guyot.		5,682
Mt. Torrey	Colorado	Colo.	King		13,500
Same			Hayden	b	14,336
Tray Mt.	Alleghanies.	Ga.	Whitney	b	14,192
Tremont Mt.		N. H.	Guyot		4,426
Tricorner Knob	Alleghanies.		Guyot		3,393
Tri-pyramid.		N. H.	Guyot		6,188
Turkey Knob.	Alleghanies.		Guyot		4,086
Twin Mt.	White	N. H.	Guyot		4,740
Mt. Tyndall.	Sierra Nevada	Cal.	Whitney	b	4,930
Uncompahgra Peak	Uncompahgra	Colo.	Hayden	t	14,386
Ute Peak	Rocky	Colo.	Hayden	b	14,540
Velie's Peak	Rocky	Colo.	Parry	b	11,968
Mt. Wachusett		Mass.	Guyot		13,456
Ward's Peak	Rocky	Mont.	Hayden	b	2,018
Mt. Washburn	Rocky	Wyo.	Hayden	b	10,371
Mt. Washington	White	N. H.	Guyot		10,388
Wedge Mt.		Colo.	Ruffner	b	6,288
Westener's Bald	Alleghanies.		Guyot		13,350
Wheeler Peak		Nev.	Engineer Corps		5,692
White-face		N. H.	Guyot		12,063
White-rock Mt	Elk	Colo.	Hayden	b	4,030
White-side	Alleghanies.		Guyot		13,847
White-top*	Alleghanies.	Va., N. C. & Tenn.	Guyot		4,931
Mt. Whitney	Sierra Nevada	Cal.	Whitney	b	5,530
Willey Mt.	White	N. H.	Guyot		14,887
Worthington Peak		Nev.	Engineer Corps		4,300
Mt. Wright	Rocky	Colo.	Parry	b	8,400
Mt. Yale	Rocky	Colo.	Whitney	b	11,800
Same			Hayden	t	14,081
Yeates' Knob	Alleghanies.		Guyot		14,151
Yellow Mt.	Alleghanies.		Guyot		5,975
					5,108

* At corner of the three States.

- a. Aneroid barometer.
b. Mercurial barometer.

1. Levels.
t. Trigonometrical measurement.

TABLE III.
FOREIGN MOUNTAINS.

Name.	Range.	Country.	Eleva-tion.
Aconcagua.....	Andes.....	Bolivia.....	23,910
Antisana.....	Andes.....	Quito.....	19,137
Autuco.....	Andes.....	Chili.....	8,918
Arequipa.....	Andes.....	Bolivia.....	20,320
Mont Blanc.....	Alps.....	France.....	15,646
Mt. Buckland.....		Tierra del Fuego.....	4,060
Chimborazo.....	Andes.....		21,440
Chipicani.....	Andes.....	Peru.....	19,745
Chuquibamba.....	Andes.....	Bolivia.....	21,000
Cotopaxi.....	Andes.....	Quito.....	18,875
Coyambe.....	Andes.....	Quito.....	19,535
Mt. Darwin.....		Tierra del Fuego.....	6,800
Doga Bang.....	Himalayas.....		23,762
Doora Ghaut.....	Himalayas.....		17,750
Dwalgirin.....	Himalayas.....		26,826
Dyarmur.....	Himalayas.....		26,629
Mt. Erebus.....		South Victoria.....	12,400
Mt. Etna.....		Sicily.....	10,874
Mt. Everest.....	Himalayas.....		29,002
Mt. Hecla.....		Iceland.....	5,210
Himalayan Range*			
Ilinica.....		Equador.....	17,380
Illinmani.....	Andes.....	Quito.....	21,149
Irasu.....		Guatemala.....	11,478
Itamba.....		Brazil.....	5,960
Iztaccituatl.....		Mexico.....	15,705
Jorullo.....		Mexico.....	4,265
Kamet.....	Himalayas.....		25,373
Kanchinjinga.....	Himalayas.....		28,156
Kilaueah.....		Hawaii.....	3,870
La Mesada.....	Andes.....	Bolivia.....	19,356
Malabar.....		Java.....	7,556
Mauna Loa.....		Hawaii.....	13,120
Mauna Kea.....		Hawaii.....	13,645
Merapi.....		Java.....	9,708
Mont Cenis.....		Savoy.....	6,778
Monte Rosa.....	Alps.....		15,208
Morne Garou.....		Antilles.....	5,007
Orizaba.....		Mexico.....	17,374
Perote.....	Andes.....		13,514
Pichincha.....	Andes.....	Quito.....	15,924
Pomerape.....	Andes.....	Bolivia.....	21,700
Popocatapetl.....	Andes.....	Mexico.....	17,717
Sahama.....	Andes.....		22,350
St. Gothard.....	Alps.....		6,976
Santiago.....	Andes.....	Chili.....	15,100
Sorato.....	Andes.....	Bolivia.....	21,290
Mt. Stokes.....		Patagonia.....	6,400
Stromboli.....			2,957
Teneriffe.....			12,182
Tolima.....	Andes.....	Quito.....	18,020
Toluco.....		Mexico.....	15,542
Tristan da Cunha.....			8,236
Ungarang.....		Java.....	7,100
Urchinskaja.....		Kamschatka.....	11,721
Vandama.....		Canary Islands.....	1,835
Vesuvius.....		Italy.....	8,479

* Up to 1870, thirteen peaks of elevations above 25,000 feet had been measured, and fifty-nine above 20,000, principally in the Western Himalayas, by the India Surveys.

TABLE IV.

PASSES.

Name.	Range.	State or Territory.	Authority or Reference.	Elevation.
Agate.....				Feet.
Argentine.....	Rocky.....	Nev.....		7, 615
Beale's.....		Colo.....		13, 100
Beckwourth.....			K. P. R. R.....	5, 127
Berthoud.....	Sierra Nevada.....			4, 682
Same.....	Rocky.....	Colo.....	Parry.....	11, 349
Big Creek.....		Colo.....	Hayden.....	11, 313
Boulder.....	Rocky.....	Nev.....	King.....	8, 922
Boundary.....	Rocky.....	Colo.....	Hayden.....	11, 613
Cadotte's.....	Rocky.....		P. R. R. Report.....	6, 030
Cajon.....	Sierra Nevada.....		P. R. R. Report.....	6, 044
Campbell's.....			P. R. R. Report.....	4, 676
Canon Blanco.....			A. & P. R. R.....	7, 152
Cedar Mt.....	Utah.....		K. P. R. R.....	6, 917
Chemenevus.....			P. R. R. Report.....	6, 364
Cimmaron.....			K. P. R. R.....	675
Cochetopa.....	Rocky.....	Colo.....	K. P. R. R.....	6, 166
Costillo.....	Rocky.....		P. R. R. Report.....	10, 032
Deer Lodge.....	Rocky.....	Mont.....	Palmer.....	9, 520
Ebbitt's.....			N. P. R. R.....	6, 276
Flathead.....	Rocky.....	Mont.....	P. R. R. Report.....	8, 793
Flathead.....	Bridger.....	Mont.....	P. R. R. Report.....	5, 459
Fremont's.....			Hayden.....	6, 769
Georgia.....	Rocky.....	Colo.....	Parry.....	7, 200
Gore's.....			Peterman's map.....	11, 487
Goshoot.....	Toano.....	Nev.....	U. P. R. R.....	9, 000
Guadelupe.....			P. R. R. Report.....	6, 065
Hamilton.....		Colo.....	Ruffner.....	5, 717
Hastings.....	Pequop.....		U. P. R. R.....	12, 370
Hoosier.....	Park.....	Colo.....	Whitney.....	6, 220
Hueco.....			P. R. R. Report.....	11, 364
Hum-pah-ya-mup.....		Cal.....	P. R. R. Report.....	4, 812
Indian.....		Cal.....	P. R. R. Report.....	5, 351
Ives'.....		Nev.....	King.....	9, 057
Jones'.....	Rocky.....	Colo.....	U. P. R. R.....	6, 076
Kananaskie.....	Rocky.....	B. A.....	Parry.....	12, 400
Kutanie.....		B. A.....	Palliser.....	5, 985
Lake Creek.....	Rocky.....	B. A.....	Palliser.....	6, 000
Lewis & Clarke.....	Sawatch.....	Colo.....	Hayden.....	12, 329
Livermore's.....	Rocky.....	Mont.....	P. R. R. Report.....	6, 323
Long's.....	Coast.....	Cal.....	Whitney.....	686
Lost Knife.....	Rocky.....	Colo.....	Palmer.....	7, 660
Madelin.....		Colo.....	Palmer.....	8, 400
Madison.....	Sierra Nevada.....	Cal.....	P. R. R. Report.....	5, 667
Marias.....	Rocky.....	Mont.....	P. R. R. Report.....	6, 911
McCabe's.....		Mont.....	P. R. R. Report.....	8, 500
Mechanic's.....	Rocky.....		U. P. R. R.....	5, 019
Mohave.....	Blue.....		U. P. R. R.....	4, 226
Mono.....	Sierra Nevada.....	Cal.....	A. & P. R. R.....	1, 475
Musca.....		Colo.....	Whitney.....	10, 765
Navajo.....			Ruffner.....	9, 353
New.....	Sierra Nevada.....		K. P. R. R.....	7, 177
Nugent's.....			P. R. R. Report.....	3, 164
Pacheco.....		Cal.....	Whitney.....	3, 256
Panoche.....		Cal.....	Whitney.....	1, 470
				2, 500

Passes—Continued.

Name.	Range.	State or Territory.	Authority or Reference.	Elevation.
Pequop				<i>Feet.</i>
Piute	Wahsatch		U. P. R. R.	6,143
Post Oak			K. P. R. R.	2,579
Puncho	Sawatch	Colo.	Palmer.	7,475
Railroad		Ariz.	Ruffner	9,353
Raton		Colo.	Ives	3,764
Red Dome			U. P. R. R.	5,896
Red Rock	Rocky	Wyo	Hayden	4,720
Reed's.	Humboldt		U. P. R. R.	7,271
Roubideau's	Rocky	Colo.	P. R. R. Report	5,850
Runks			U. P. R. R.	9,772
St. Vrain's		Wyo	Peterman's map	4,148
San Fernando	Sierra Nevada	Cal.	P. R. R. Report	8,000
San Francisco	Rocky	Colo.	Palmer	1,940
San Francisquito	Sierra Nevada	Cal.	P. R. R. Report	8,560
San Gorgonio	Sierra Nevada	Cal.	P. R. R. Report	3,718
Sangre de Cristo	Rocky	Cal.	P. R. R. Report	2,800
Schenousky's	Pequop	Colo.	P. R. R. Report	9,186
Sitgreave's	Sierra Nevada	Cal.	U. P. R. R.	6,355
Slate River	Elk		Ives	3,652
Soledad		Colo.	Hayden	11,579
Sonora	Sierra Nevada	Cal.	A. & P. R. R.	3,215
South	Rocky	Mont.	P. R. R. Report	10,115
South Nez Perce	Rocky	Mont.	P. R. R. Report	7,490
Summit	Rocky	Oregon.	P. R. R. Report	8,000
Tah-ee-chay-pah	Sierra Nevada	Cal.	P. R. R. Report	5,595
Tarryall	Park	Colo.	Hayden	4,008
Tejon	Sierra Nevada	Cal.	P. R. R. Report	*12,176
Tennessee	Sawatch	Colo.	Hayden	5,364
Teton	Teton	Wyo	Hayden	10,418
Thompson's		Wyo	Peterman's map	8,464
Tonto		Ariz.	A. & P. R. R.	8,190
Trinchera			K. P. R. R.	7,529
Trout Creek	Park	Colo.	Whitney	7,079
Truckee	Sierra Nevada	Nev.	P. R. R. Report	9,320
Tyhee	Rocky	Wyo	Hayden	7,200
Union	Rocky	Wyo	Raynolds	7,063
Vermillion	Rocky	B. A.	Palliser	*10,000
Wahsatch	Rocky		P. R. R. Report	4,944
Walker's	Sierra Nevada	Cal.	P. R. R. Report	7,820
Wallapi	Rocky		K. P. R. R.	5,302
Warner's	Sierra Nevada	Cal.	P. R. R. Report	3,473
Weston's	Park	Colo.	P. R. R. Report	3,870
Whipple's			Hayden	11,676
Wild Flax	Rocky		K. P. R. R.	7,206
Yampa			Palmer	8,900
Zuni		N. M.	K. P. R. R.	5,241
			K. P. R. R.	7,926

*Approximate.

TABLE V.

PLATEAUX IN THE UNITED STATES.

Coteau des Prairies, Dakota.....	1,800 to 2,000
North Park, Colorado.....	average 8,000
Middle Park, Colorado.....	average 7,500
South Park, Colorado.....	8,000 to 10,000
San Luis Valley, Colorado.....	7,000 to 8,000
Animas Park, Colorado.....	7,000
Llano Estacado, Texas and New Mexico.....	3,200 to 4,700
Colorado Plateau, Arizona.....	average 5,500
Salt Lake Valley, Utah.....	4,200 to 4,500
Laramie Plains, Wyoming.....	average 7,000
Snake River Plain, Idaho.....	4,000 to 4,500
Sevier Lake Basin, Utah.....	4,700
Humboldt River Basin (Lassen's Meadows).....	4,200
Carson River Basin.....	3,800
Walker's River Basin.....	4,100
Mojave River Basin.....	1,100

TABLE VI.

PLATEAUX IN FOREIGN COUNTRIES.

(From Humboldt.)

Abyssinia, Africa.....	6,075
Antisana, South America.....	13,451
Auvergne, France.....	1,087
Axim, Abyssinia.....	7,034
Bavaria	1,663
Caracas, South America.....	3,070
Valley of Cashmir, India.....	5,346
Castile, Spain.....	2,238
Caxamarla, Peru.....	9,021
Desert of Gobi.....	4,623
Mexico.....	7,482
Mysore.....	2,942
Orange River, South Africa.....	6,395
Popayan.....	5,755
Potosi, South America.....	13,665
Province de los Pastos.....	10,231
Quito.....	9,528
Thibet	9,592
Upper Thibet.....	9,995
Middle Thibet.....	6,300
Little Thibet.....	11,977
Deotsuh.....	14,965
Sacred Lakes.....	13,429
General elevation in Thibet between long. 73° and 85°	11,500
Santa Fé de Bogota, South America.....	8,413
Near Lake Titicaca, South America.....	12,853

TABLE VII.

LAKES.

Name.	Eleva- tion.	Name.	Eleva- tion.
Bear, Utah.....	5,931	Minnetonka, Minnesota.....	913
Carson, Nevada.....	3,840	Moosehead, Maine.....	1,038
Cass, Minnesota.....	1,402	Ontario.....	250
Champlain, New York.....	101	Osborn's, Colorado.....	8,821
Cœur d'Alene, Washington Ter.....	2,150	Pemidji, Minnesota.....	1,456
Devil's, Dakota.....	1,467	Pend Oreille, Idaho.....	2,093
Drummond, Virginia.....	21	Quinsigamond, Massachusetts.....	361
Erie.....	573	Rainy.....	1,100
George, New York.....	324	St. Clair.....	570
Graham, Minnesota.....	1,403	San Luis, Colorado.....	7,500
Great Salt, Utah.....	4,200	Sebago, Maine.....	270
Henderson, New York.....	1,936	Self's, Minnesota.....	842
Henry's, Idaho.....	6,443	Sevier, Utah.....	4,690
Heron, Minnesota.....	1,361	Shoshone, Wyoming.....	7,870
Huron.....	589	Superior.....	600
Itasca, Minnesota.....	1,575	Tahoe, California.....	6,700
Kaniskusahkee, Idaho.....	2,431	Traverse, Minnesota.....	1,456
Klamath, Oregon.....	4,131	Twin Lakes, Colorado.....	9,357
Lac qui Parle, Minnesota.....	946	Walker's, Nevada.....(estimated)	3,840
Lake of the Woods.....	1,040	Winnebago.....	748
Leech, Minnesota.....	1,330	Winnepiseogee, New Hampshire.....	518
Lewis, Wyoming.....	7,882	Winnipeg.....	630
Mahopac, New York.....	660	Yellowstone.....	7,788
Michigan.....	589		

TABLE VIII.

ELEVATION OF THE TIMBER LINE.

Latitude 45° to 46°:		Latitude 39° to 40°:	
Mt. Delano, Montana.....	8,800	Gray's Peak, Colorado.....	11,100
Ward's Peak, Montana.....	9,200	Mt. Evans.....	11,200
Mt. Blackmore, Montana.....	9,600	James' Peak.....	11,000
Latitude 44° to 45°:		Arapahoe Peak.....	11,000
Cascade Range.....	7,000	Mt. Byers, Colorado.....	11,300
Electric Peak, Wyoming.....	9,400	Mt. Powell, Colorado.....	11,500
Mt. Washburn, Wyoming.....	9,900	Mt. Guyot, Colorado.....	11,600
Latitude 43° to 44°:		Mt. Silverheels, Colorado.....	11,400
Mt. Hayden, Wyo., Teton Range.....	11,000	Mt. Lincoln, Colorado.....	11,900
Wind River Mountains.....	10,200	Massive Mt., Colorado.....	11,400
Latitude 41° to 42°:		Mt. Elbert, Colorado.....	11,700
Mt. Shasta, California.....	8,000	La Plata Mt., Colorado.....	11,900
Latitude 40° to 41°:		Grizzly Peak, Colorado.....	11,600
Gilbert's Peak, Uinta Mountains.....	11,100	White Rock Mt., Colorado.....	11,700
Long's Peak, Colorado.....	11,100	Latitude 38° to 39°:	
Mt. Audubon, Colorado.....	11,300	Pike's Peak, Colorado.....	11,500
Mt. Lillie, Colorado.....	11,000	Buffalo Peak, Colorado.....	11,900
Parkview Mt., Colorado.....	11,000	Mt. Harvard, Colorado.....	11,900
		Mt. Princeton, Colorado.....	11,300
		Cunningham Pass, Colorado.....	11,500
		Latitude 35° to 36°:	
		San Francisco Mt., Arizona.....	11,547

SECTION II.

ELEVATIONS AT WATER-LEVEL OF RIVERS.

Mississippi River.

	From mouth.	Eleva- tion.	Fall per mile.	Authority.
Source.....	<i>Miles.</i> 2,616	<i>Feet.</i> 1,680	<i>Feet.</i> 17.50	Nicollet.
Lake Itasca.....	2,610	1,575	do.	
Entrance to Lake Traverse.....	2,520	1,456	1.32	do.
Entrance to Lake Cass.....	2,475	1,402	1.20	do.
Mouth of Leech Lake River	2,395	1,356	0.57	do.
Head of Falls of Peckagama.....	2,347	1,340	0.33	do.
Mouth of Swan River.....	2,284	1,290	0.73	do.
Mouth of Sandy Lake River.....	2,246	1,253	0.95	do.
Mouth of Pine River.....	2,149	1,176	0.79	do.
Mouth of Crow Wing River.....	2,101	1,130	0.95	do.
Sauk Rapids.....		982	do.	Railroad levels.
St. Cloud (low water).....		953	do.	
St. Anthony (high water).....		791	do.	
One-half mile below St. Anthony's Falls (low water).....		711½	do.	
St. Paul (high water).....		697	do.	
St. Paul (low water).....	1,944	676	2.93	do.
La Crosse.....	1,800	639	0.22	do.
Prairie du Chien.....	1,739	600	0.64	do.
Dubuque (low water).....		599	do.	
Rock Island (high water of 1852).....		567	do.	
Burlington (high water of 1851).....		529	do.	
Keokuk (high water of 1851).....		503	do.	
Keokuk (extreme low water).....		482	do.	
Quincy (high water of 1851).....		493	do.	
Quincy (low water of 1854).....		472	do.	
St. Louis (high water of 1844).....		436	do.	
St. Louis (high water of 1858).....		432	do.	
St. Louis (high water of 1851).....		431	do.	
St. Louis (extreme low water).....		394	do.	
St. Louis (ordinary level).....	1,270	408	do.	
Cairo.....	1,097	322	0.50	do.
Columbus.....	1,076	310	0.57	do.
Memphis.....	872	221	0.44	do.
Gaines Landing.....	647	149	0.32	do.
Natchez.....	378	66	0.31	do.
Baton Rouge.....	245	34	0.24	do.
Mouth.....	0	0	0.14	do.

Red River of Louisiana.

Source.....	1,200	2,450	do.
Preston.....	820	641	4.80
Fulton.....	595	242	1.80
Head of raft.....	405	207	0.20
Shreveport.....	330	180	0.36
Mouth of Black River.....	30	58	0.41
Mouth.....	0	54	0.14

Canadian River.

	From mouth.	Eleva- tion.	Fall per mile.
	Miles.	Feet.	Feet.
Mouth of Spring Creek.....		2,678	
Mouth of Valley Creek.....		2,505	
Mouth of Wine Creek.....		2,454	
Mouth of Wolf Creek.....		2,319	
Epsom Springs.....		2,171	
Fort Smith.....		466	

Average fall per mile from the mouth of Pajarito Creek, for two hundred miles eastward, is about nine feet.

Kansas River.

Mouth of Saline River.....		1,592	
Fort Riley.....	132	678	
Manhattan.....	115	624	3.18
Topeka.....	65	504	2.40
Lawrence.....	39	444	2.31
Wyandotte (mouth).....	0	382	1.59

Arkansas River.

Source.....	1,514	10,000	
Mouth of Fontaine qui Bouille.....	1,364	4,880	34.13
Mouth of Apishpa Creek.....	1,323	4,371	12.41
Twenty-four miles above Bent's Fort.....	1,313	4,091	28.00
Near Bent's Fort.....	1,289	3,672	17.45
	1,272	3,537	7.09
	1,249	3,328	9.08
	1,228	3,166	14.72
West line of Kansas.....	1,207	3,047	5.66
	1,184	2,852	8.47
	1,163	2,692	7.62
	1,141	2,556	6.18
Santa Fé Crossing.....	1,121	2,431	6.25
Near Fort Atkinson.....	1,095	2,331	3.85
Second Coon Creek.....		2,244	
First Coon Creek.....		2,004	
Mouth of Pawnee Fork.....		1,962	
Mouth of Walnut Creek.....		1,372	
Great Bend.....	992	1,658	
Near Fort Gibson.....	642	560	3.14
Near Fort Smith.....	522	418	1.18
Little Rock.....	250	252	0.61
Mouth.....	0	162	0.36

Platte River.

Junction of North and South Platte.....		2,789	
Above Fort Kearney.....	88	2,750	
	65	2,500	10.87
	47	2,335	9.17
	11	2,075	7.22
Mouth.....		966	

Average fall per mile throughout its length, about six feet.

North Platte River.

	From mouth.	Eleva- tion.	Fall per mile.
	Miles.	Feet.	Feet.
Above the mouth of Ash Creek.....	135	4,250	-----
	110	3,985	10.60
	92	3,950	1.94
	75	3,820	7.64
	50	3,641	7.16
	42	3,575	8.25
	23	3,460	6.05
	0	3,325	5.87
Mouth (at North Platte).....		2,789	-----

Average fall per mile from Fort Fetterman to mouth, seven feet.

South Platte River.

	From Denver.		
Head, near Mt. Lincoln, Colorado.....	118	11,000	-----
Fairplay, South Park, Colorado.....	104	9,800	86
Foot of South Park, Colorado.....	68	7,990	50
Head of Cañon	60	7,747	30
Foot of Cañon	18	5,300	58
Denver, Colorado	0	5,000	17
Mouth		2,789	9 to 10

Missouri River.

	From mouth.		
Three Forks (head).....	2,824	4,100	-----
Mouth of Sun River.....	2,689	3,573	3.90
Foot of Falls.....	2,670	2,964	31.59
Fort Benton.....	2,644	2,845	4.56
Fort Union.....	1,894	2,194	0.88
Seven miles above the mouth of Muddy Creek.....	1,843	1,974	4.31
Fort Berthold.....	1,676	1,873	0.60
Three miles above La Fontaine Rouge.....	1,639	1,834	1.05
Fort Pierre.....	1,246	1,475	0.91
Shyenne Agency.....		1,415	-----
Fort Sully.....		1,398	-----
Sioux City (low water).....	842	1,104	-----
Sioux City (bed of river).....		1,094	-----
Omaha (high water).....		997	-----
Omaha (low water).....		978	-----
Omaha (bed of river).....		964	-----
St. Joseph (high water).....	484	820	-----
Kansas City (high water in 1844).....		771	-----
Mouth.....	0	416	-----

Yellowstone River.

	From mouth of Shields's River.		
Yellowstone Lake.....	105.5	7,788	-----
Top of Upper Falls (height, 140 feet).....	90.5	7,693	6.3
Top of Lower Falls (height, 397 feet).....	90.0	7,485	13.6
Mouth of Tower Creek.....	77.0	6,207	67.8
Mouth of Gardiner's River.....	54.0	5,360	53.6
Mouth of Cañon Creek.....	38.0	5,058	21.8
Head of Lower Cañon.....	8.0	4,643	12.2
Mouth of Big Horn.....		2,831	-----
Mouth		2,184	-----

Big Horn River.

	From mouth.	Eleva- tion.	Fall per mile.
	Miles.	Feet.	Feet.
Source.....		7,527	-----
Mouth of Popo Agie.....		5,347	-----
Leaves Big Horn Mountains.....		3,534	-----
Mouth.....		2,831	-----

Jefferson River.

At head of Red Rock Creek, (main fork,) about.....		6,500	-----
At Beaverhead.....		4,888	-----
At mouth of Big Hole River.....		4,786	-----
At bridge.....		4,672	-----
At mouth of Hell Cañon Creek.....		4,598	-----
At mouth of Fish Creek.....		4,457	-----
At mouth of White Tail Deer Creek.....		4,351	-----
At mouth of North Boulder Creek.....		4,303	-----
At head of cañon.....		4,276	-----
At foot of cañon.....		4,219	-----
At mouth.....		4,100	-----

Big Hole River, (branch of Jefferson.)

At mouth of Divide Creek.....		5,499	-----
At cañon.....		5,311	-----
At mouth of Camp Creek.....		5,203	-----
At mouth.....		4,786	-----

Madison River.

Head, Madison Lake.....	170	8,301	-----
In Upper Geyser Basin.....	160	7,367	93.4
Mouth of East Fork.....	148	7,237	10.8
Mouth of Gibbon's Fork.....	142	6,808	71.5
Mouth of South Fork (head of Middle Cañon).....	116	6,567	9.3
Middle of Middle Cañon.....	103	6,348	16.8
Mouth of Indian Creek.....	66	5,494	23.1
Opposite Virginia City.....	55	5,026	42.5
Head of Lower Cañon.....	41	4,848	12.7
Foot of Lower Cañon.....	23	4,521	18.2
Mouth.....	0	4,129	17.0

Gallatin River.

Head.....	93	6,893	-----
Ten miles above cañon.....	67	6,149	26.0
Middle of cañon.....	52	5,586	37.5
Foot of cañon.....	4	5,215	41.4
Bridge.....	20	4,493	30.1
Mouth.....	0	4,098	19.8

Colorado River. (From Ives's Report.)

	From mouth.	Eleva- tion.	Fall per mile.
	Miles.	Feet.	Feet.
Shallow Rapid.....	500	860	
Shallow Rapid.....	489	790	6.36
Deep Rapid.....	456	656	4.06
Mojave Valley.....	411	565	2.02
Mojave Cañon.....	382	524	1.41
Mouth of Williams's River.....	340	465	1.40
Beaver Island.....	322	440	1.39
Riverside Mountain.....	302	409	1.55
Halfway Bend.....	279	378	1.35
Long Shoals.....	260	350	1.47
Long Bend.....	239	322	1.33
Foot of Great Colorado Valley.....	210	282	1.38
Canebrake Cañon.....	188	252	1.36
Purple Hill Pass.....	175	234	1.38
Explorer's Pass.....	166	222	1.33
Fort Yuma.....	150	200	1.38
Cocopa Village.....	132	172	1.56
Cocopa Village.....	119	155	1.31
Cocopa Village.....	109	140	1.50
Cocopa Village.....	99	128	1.20
Cocopa Village.....	89	112	1.60
Cocopa Village.....	78	97	1.36
Cocopa Village.....	64	77	1.43
Cocopa Village.....	48	54	1.44
Robinson's Landing.....	10	0	1.42

Williams's River, (branch of Rio Colorado.)

Head.....	145	5,752	
	138	5,360	56.00
	128	4,812	54.80
	80	2,243	53.52
	71	1,945	33.11
	67	1,853	23.00
	62	1,657	39.80
	52	1,308	34.90
	40	1,184	10.33
	28	899	23.75
	17	693	18.72
	13	504	47.25
Mouth	0	378	9.69

Rio Puerco.

	From Navajo Springs.		
Navajo Springs.....	0	5,655	
Mouth of Leroux Fork	46	5,016	
	59	4,802	16.46
	67	4,735	8.38
	77	4,675	6.00
	86	4,618	6.33
	102	4,594	1.50

LISTS OF ELEVATIONS.

Gila River.

	From mouth.	Eleva- tion.	Fall per mile.
	Miles.	Feet.	Feet.
	578	4,347	
	418	3,732	3.8
	390	3,147	20.9
	327	2,674	7.5
	230	1,751	9.5
	193	1,419	9.0
	126	845	8.6
	87	293	11.3
Mouth.	0	254	0.5

Mojave River.

Mojave depot camp.....		2,664	-----
Miles from above.....		2,227	-----
	20	2,117	7.85
	34	1,820	12.38
	58	1,111	22.87
	89		

Rio Grande River.

In San Luis Valley (about).....		7,500	-----
Peña Blanca.....		5,288	-----
Mouth of Rio Galisteo.....		5,242	-----
Albuquerque.....		5,026	-----
Isleta		4,910	-----
Socorro.....		4,560	-----
Alamosa.....		4,200	-----
El Paso.....		3,800	-----

Mean fall per mile from Peña Blanca to Isleta, 5.86 feet.

Sacramento River.

	From Fort Reading.		
	170	4,472	-----
	138	3,622	26.57
Mouth of Fall River.....	124	3,250	26.57
	110	2,867	27.36
	88	2,177	31.36
	80	1,730	55.88
	64	1,156	35.87
	49	1,078	5.20
Mouth of McCloud's River.....	33	922	9.75
	22	837	7.73
Fort Reading.....	0	675	7.36

Rate of fall of the principal rivers of Iowa.

Rivers.	Part of course.	Fall per mile.	Authority.
		Ft. In.	
Mississippi	From Lansing to the confluence of the Missouri.	0 6	J. E. Ainsworth.
Missouri	From Sioux City to Council Bluffs.....	1 0	Railroad levels.
Des Moines.....	From Fort Dodge to Ottumwa.....	2 4	do.
Des Moines.....	From Ottumwa to the mouth.....	1 11	do.
Raccoon	From forks of the river to its mouth.....	2 11	do.
North Raccoon	From Jefferson to the forks	4 0	do.
Skunk.....	From Colfax Station to Oakland.....	2 2	do.
Skunk.....	From Oakland to the mouth.....	1 6	do.
Iowa.....	From Iowa Falls to Iowa City.....	3 1	do.
Iowa.....	From Iowa City to the mouth	2 4	do.
Cedar.....	From State boundary to Cedar Falls	3 7	do.
Cedar.....	From Cedar Falls to Moscow	2 5	do.
Cedar	From Moscow to the mouth.....	2 0	do.
Wapsipinicon.....	From Independence to the mouth.....	2 10	J. E. Ainsworth.
Maquoketa.....	From Manchester to the mouth.....	3 4	do.
Turkey	From Crane Creek to the mouth.....	5 0	Railroad levels.
Upper Iowa.....	From Decorah to the mouth.....	8 6	do.
East Nishnabotany	From Chicago, Rock Island & Pacific Railroad to the mouth.	2 5	do.
West Nishnabotany	From Chicago, Rock Island & Pacific Railroad to the mouth.	2 8	do.
Boyer.....	From Dennison to the mouth.....	3 3	do.
Little Sioux.....	From Cherokee to Smithland.....	2 6	do.
Little Sioux.....	From Smithland to the mouth	0 4	do.
Floyd.....	From fork of Willow Creek to the mouth.	3 0	J. E. Ainsworth.

The average rate of fall of—

	Feet.
Bitter Root River.....	11.1
Blackfoot Fork.....	30.0
Clarke's Fork (of Columbia).....	11.0
Pecos River.....	4.0
Snake River, from mouth of Ross Fork north	6.0

SECTION III.

RAILROAD PROFILES.

Atlantic & Pacific Railroad.

	Miles.	Eleva-tion.		Miles.	Eleva-tion.
		<i>Feet.</i>			<i>Feet.</i>
St. Louis (directrix).....	0	428	Campbell's Pass	1,366	7,152
Pacific.....	37	480	Fort Wingate (2 miles north of fort).....	1,382	6,622
Moselle.....	49.2	955	Arizona Boundary	1,420	5,890
Rolla.....	113.75	1,201	Sunset Crossing	1,521	4,760
Gasconade River.....	127	640	Tonto Pass	1,604	7,529
Dixon.....	138.5	1,168	Cedar Summit	1,624	6,908
Marshfield.....	217.58	1,521	Partridge	1,646	5,506
Springfield.....	241.9	1,382	Beale's Road	1,650	5,520
Pierce City.....	291.57	1,225	Laja Summit	1,674	6,308
Granby.....	306.56	1,063	Aubrey Valley	1,695	5,180
Seneca.....	330.25	883	Peacock Mts.....	1,741	3,408
Missouri State line.....	331	802	Wallapi Pass	1,767	3,440
Vinita Junction (with the M., K. & T. R. R.)	403	.....	Mohave Gap	1,796	1,475
Arkansas River.....	494	574	Colorado River, at the Needles.....	1,817	355
Kingfisher Creek.....	614	950	Piute Summit	1,855	2,579
North Fork.....	651	1,428	Perry Basin	1,895	728
Canadian River Junction.....	670	1,519	Agua Azul	1,932	1,999
Texas Boundary.....	770	2,020	Crater Pass	1,947	2,300
New Mexico Boundary.....	970	2,735	Mohave River	2,007	2,400
Fort Bascom.....	1,021	3,726	Soledad Pass	2,103	3,215
Anton Chico	1,114	5,690	San Buenaventura	2,168	12
Cañon Blanco	1,152	6,960	Santa Barbara	2,204	10
San Domingo (valley of the Rio Grande River).....	1,199	5,100	San Luis Summit	2,301	1,561
Albuquerque.....	1,234	4,836	Walsunville	2,437	28
Isleta (leave Rio Grande).....	1,247	4,768	San Francisco	2,537	48

Kansas Pacific Railroad.

State line between Kansas and Missouri	0	764	Rossville	83	951
Armstrong.....	1	673	St. Mary's	90	973
Muncy Siding.....	8	685	Vermillion Tank	98	989
Secondine.....	9	809	Wamego	104	1,018
Edouardsville.....	13	801	St. George	110	1,018
Tiblow.....	16	811	Manhattan	119	1,042
Lenape.....	22	799	Ogden	129	1,078
Stranger.....	27	807	Fort Riley	135	1,090
Fall Leaf.....	31	827	Junction City	138	1,100
Lawrence and Leaven- worth Junction	36	832	Chapman Creek	150	1,132
Lawrence	38	846	Detroit	157	1,153
Buck Creek.....	45	864	Abilene	162	1,173
Williamsville.....	48	869	Sand Spring Tank	166	1,164
Perryville.....	51	870	Solomon	171	1,193
Medina.....	52	871	Salina	185	1,243
Newman.....	55	879	Bavaria	194	1,289
Grantville.....	60	895	Brookville	200	1,366
Topeka	67	904	Rocksprings	205	1,459
Silver Lake.....	77	933	Elm Creek	210	1,586
			Summit Siding	216	1,672
			Fort Harker	218	1,600

(39)

Kansas Pacific Railroad—Continued.

	Miles.	Eleva-tion.		Miles.	Eleva-tion.
		<i>Feet.</i>			<i>Feet.</i>
Ellsworth.....	223	1,556	Arapahoe.....	452	4,024
Blackwolf.....	230	1,583	Cheyenne Wells.....	462	4,295
Wilson.....	239	1,702	First View.....	472	4,595
Bunker Hill.....	252	1,882	Eureka.....	483	4,263
Fossil.....	262	1,850	Kit Carson.....	487	4,307
Walker.....	274	1,962	Wild Horse.....	499	4,456
North Fork Bend.....	278	1,946	Aroya.....	510	4,666
Hays.....	289	2,009	Mirage.....	523	4,859
Ellis.....	302	2,135	Hugo.....	534	5,068
Ogallah.....	312	2,385	Lake.....	547	5,319
Park's Fort.....		2,463	River Bend.....	555	5,511
Coyote.....	336	2,608	Cedar Point.....	562	5,730
Buffalo.....	350	2,793	Godfrey.....	566	5,621
Grimmell.....	361	2,922	Agate.....	572	5,476
Carlyle.....	376	3,064	Deer Trail.....	583	5,203
Monument.....	386	3,199	Bijou.....	595	5,221
Gopher.....	397	3,336	Kiowa.....	608	5,514
Sheridan.....	405	3,121	Box Elder.....	617	5,546
Wallace.....		3,319	Schuyler.....	629	5,354
Pond Creek.....	422	3,291	Denver Pacific Junction.....	636	5,211
Eagle Tail.....	429	3,452	Denver.....	639	5,197
Monotony.....	437	3,792			

Arkansas Valley Railroad.

Kit Carson.....	0	4,307		46	4,039
Big Sandy Creek.....	1	4,297	Las Animas.....	50	3,967
	5	4,363		60	3,966
Rush Creek.....	8	4,262	Bent's Fort.....	66	4,039
Summit.....	12	4,462		70	4,052
	22	4,375		80	4,151
Wild Horse Spring.....	23	4,330		90	4,262
	24	4,380		100	4,328
	26	4,367		110	4,400
	29	4,425	Boonville.....	120	4,497
	34	4,445		130	4,622
	36	4,356	Pueblo.....	136	4,674

Leavenworth branch of the Kansas Pacific Railroad.

Junction (2 miles east of Lawrence)	832	Even slope down to the Missouri River.....	
Undulating plateau summits not over	938	Missouri Pacific Junction.....	813
Valley of Stranger's River.....	718	Leavenworth.....	778
Plateau summit.....	973		783

Denver & South Park Railroad, (preliminary line.)

Denver.....	5,196	Kenosha House.....	9,702
Foot of canon of the South Platte.....	5,564	Kenosha Summit.....	10,001
Follows up the canon of South Platte.		Jefferson Creek, South Park.....	9,592
Mouth of the North Fork.....	6,110	Michigan Creek.....	9,502
Follows up valley of the North Fork.		Tarryall Creek.....	9,849
Mouth of Elk Creek.....	6,337	Trout Creek.....	9,707
Mouth of Deer Creek.....	7,157	Beaver Creek.....	9,994
Trout Creek.....	7,567	Fairplay.....	9,964
Bailey's Ranche.....	7,742	Middle Fork South Platte.....	10,313
Hepburn's Park.....	8,237	Mouth of Mosquito Creek.....	10,328
Grant.....	8,587	Dudley.....	10,435
Godfrey's Ranche.....	8,982		

Denver & Rio Grande Railroad.

	Miles.	Eleva-tion.		Miles.	Eleva-tion.
		<i>Feet.</i>			<i>Feet.</i>
Denver	0	5,196	Widefield	84	5,712
Littleton	10	5,361	Fountain	89	5,562
Acequia	17	5,529	Little Buttes	94	5,370
Plum	25	5,834	North Pueblo	118	4,701
Citadel	31	6,122	South Pueblo	120	4,674
Douglas	35	6,324	Meadows	129	4,801
Larkspur	43	6,665	Swallow's Nest	134	4,860
Greenland	47	6,927	Carlisle Springs	141	4,952
Divide	52	7,208	Beaver Creek	143	4,999
Henry's	56	6,983	Labran	153	5,182
Berst's	58	6,811	Coal Banks	155	5,356
Husted's	62	6,599	Oil Creek	156	5,177
Monument	67	6,354	Cañon City	160	5,494
Colorado Springs	76	5,986			

Chicago & Northwestern Railroad, (Iowa division.)

Clinton, Iowa (high water in Miss. River in 1864)	584	Moingona	919
Clinton (bridge)	602	Beaver	1,039
Cedar Rapids (Cedar River)	719	Hagar	1,045
Fairfax	780	New Jefferson	1,069
Norway	808	Coon River	1,017
Blairstown	850	Scranton	1,089
Belleplaine	831	Glidden	1,238
Chelsea	798	Carroll	1,272
Toledo	827	East Side	1,390
Iowa River	847	Tip-top	1,438
Orford	864	West Side	1,340
Le Grand	949	Vail	1,273
Marshall	906	Dennison	1,270
State Centre	1,082	Paradise	1,148
Colo	1,055	Dunlap	1,111
Nevada	1,013	Woodbine	1,072
Skunk River	905	Missouri Valley Junction	1,020
Ames	934	Honey Creek	1,022
Boone	951	Crescent	1,009
Des Moines River	965	Council Bluffs	1,000

Burlington & Missouri River Railroad.

High water in Mississippi River at Burlington	529	Tyrone	829
Middletown	731	Melrose	863
Danville	722	Russell	1,028
Mt. Pleasant	732	Chariton	1,041
Skunk River (low water)	558	White Breast River	840
Chequaque	612	Osceola	1,134
Glendale	752	Oakland	1,205
Fairfield	775	Four-mile Creek (Thayer Station)	1,033
Whitfield	685	Grand River	1,017
Batavia	648	Highland Station (summit)	1,311
Agency	809	Cromwell	1,233
Ottumwa	639	Corning	1,140
Des Moines River	614	Nodaway	1,093
Chillicothe	654	East Nodaway River	1,014
Frederick	744	Middle Nodaway River	1,015
Albia	955	Vallisca	1,072
		West Nodaway River	1,113

Burlington & Missouri River Railroad—Continued.

	Eleva- tion.		Eleva- tion.
Middle Tarkeo River.....	1,108	Greenwood.....	1,130
Red Oak.....	1,048	Waverly.....	1,126
East Nishnabotany River.....	1,020	Newton.....	1,141
Walnut.....	1,056	Lincoln.....	1,154
Harmony.....	1,056	Denton.....	1,238
West Nishnabotany River.....	974	Highland.....	1,419
Glenwood.....	996	Crete.....	1,360
Pacific Station on Council Bluffs & St. Joseph Railroad.....	966	Dorchester.....	1,493
Missouri River (high water).....	960	Fairmount.....	1,648
Missouri River (low water).....	944	Grafton.....	1,704
Plattsmouth.....	972	Harvard.....	1,807
Omaha Junction.....	989	Inland.....	1,887
Louisville.....	1,029	Juniata.....	1,978
South Bend.....	991	Kenesaw.....	2,057
Ashland.....	1,091	Lowell.....	2,074
		Kearney Junction.....	2,157

Keokuk Northern and Iowa Northern Central Railroads.

Bonaparte.....	565	English River (low water).....	607
Big Mound Summit.....	745	Iowa River at crossing one mile below Iowa City.....	626
Summit near Salem.....	720	Brown Summit.....	864
Skunk River at Oakland (low water).....	560	Cedar River.....	711
Burlington & Missouri River R. R. at Mt Pleasant.....	732	Chicago & Northwestern depot at Cedar Rapids.....	741
Summit west of Crawfordsville.....	737		
Washington	757		

Central Railroad of Iowa.

Crossing of Iowa River.....	922	Eldora.....	1,022
Albion.....	946	Eldora village.....	1,052
Albion village.....	971	Steamboat Rock.....	1,024
Liscomb.....	1,015	Steamboat Rock village.....	1,058
Liscomb village.....	1,025	Water in Iowa River at Steamboat Rock.....	1,008
Union.....	953	Ackley.....	1,144
Union village.....	953		
Crossing of south fork of Iowa River.	943		

Sioux City & Pacific Railroad.

Missouri Valley Junction.....	1,020	Sloan.....	1,091
California Junction.....	1,020	Sargeant's Bluffs.....	1,114
Modale.....	1,021	Floyd's Bluffs.....	1,404
Mondamin.....	1,031	Sioux City.....	1,123
Little Sioux.....	1,042	Low water in Missouri River at Sioux City.....	1,104
Blencoe.....	1,062		
Onawa.....	1,068		

Hannibal & St. Joseph Railroad.

	Miles.	Eleva- tion.		Miles.	Eleva- tion.
		<i>Feet.</i>			<i>Feet.</i>
Hannibal.....	0	794	Macon.....	70	919
Palmyra.....	15	694	Brookfield.....	104	802
Ely.....	24	731	La Clede.....	109	830
Monroe.....	30	794	Utica.....	135	796
Lakeman.....	42	782	Cameron.....	171	1,067
Shelbina.....	47	718	Lathrop.....	187	1,105
Clarence.....	59	867	Harlem.....	223	782
Carbon.....	67	867	Kansas City.....	225	764

Missouri Pacific Railroad.

St. Louis (directrix).....	0	428	Warrensburg.....	218	874
Franklin.....	37	480	Holden.....	232	854
Gasconade Riv. (low wat'r).....	88	496	Lee's Summit.....	259.5	1,054
Osage River (low water).....	117	521	Independence(fair gro'nd)	272	1,034
Jefferson City.....	125	556	Big Blue Riv. (low water).....		718
Sedalia.....	188.5	889	Kansas City (levee).....	282	764

International and Houston & Great Northern Railroads.

Houston.....	0	50	Killgore.....	222	371
Neches.....	163	413	Longview.....	235	336
Hearne.....	175	310	Oakwoods.....	336	277
Jacksonville.....	179	527	Keechi.....	346	285
Reynolds.....	185	521	Jewett.....	363	527
Troup.....	197	465	Lake.....	385	315
Overton.....	210	509	Englewood.....	395	420

St. Joseph & Denver City Railroad.

St. Joseph (high water in Missouri River).....	0	820	Beattie.....	98.5	1,302
St. Joseph (low water in Missouri River).....		800	Marysville.....	112	1,164
Watheña.....	4.5	824	Hanover.....	127.5	1,236
Troy.....	13	1,099	Hollenburg.....	136.5	1,267
A. & N. Junction.....	14.5	1,117	Steele City.....	141	1,277
Norway.....	18	1,049	Fairbury.....	152	1,324
Ryan.....	22	900	Alexandria.....	166.5	1,416
Severance.....	24	910	Belvidere.....	175.5	1,509
Wolf River Crossing.....	25	907	Carleton.....	183	1,562
North Robinson.....	33	957	Davenport.....	190.5	1,668
Manville.....	36.5	980	Eden.....	200	1,737
Hiawatha.....	42	1,102	Fairfield.....	208	1,788
Hamlin.....	49.5	991	Georgetown.....	217.5	1,852
Sabetha.....	60	1,316	Hastings.....	226	1,944
Seneca.....	77	1,162	Idaho.....	234.5	2,011
Axtell.....	88.5	1,371	Jefferson.....	242.5	2,087
			Fort Kearney.....	261	2,130
			Kearney Junction.....	267	2,157

*Manhattan branch of the St. Joseph & Denver City Railroad,
(From near A. & N. Junction to Manhattan, Kansas.)*

	Miles.	Eleva-tion.		Miles.	Eleva-tion.
Junction.....	0	1,124	Soldier Creek.....	57.5	1,148
Little Grasshopper Creek.....	25	976	Summit.....	65	1,400
Walnut Creek.....	29	974	Red Vermillion.....	72.5	1,054
Netawaka.....	36.5	1,148	Louisville.....	87.5	1,014
Circleville.....	51.5	1,124	Manhattan.....	102.5	1,042

*Branch of the St. Joseph and Denver City Railroad,
(From a point between Hanover and Hollenburg to the Republican River.)*

Little Blue River	0	1,234	Belleville.....	43.5	1,544
Washington.....	11.5	1,324	Republican River.....	53.5	1,439
Mill Creek.....	22.5	1,284			

Union Pacific Railroad.

Omaha (track at depot).....	0	1,060	Potter.....	433	4,408
Summit Siding.....	4	1,180	Antelope.....	451	4,750
Gilmore.....	10	1,014	Bushnell.....	463	4,898
Papillion.....	15	1,010	Pine Bluffs.....	473	5,064
Elkhorn.....	29	1,188	Egbert.....	484	5,310
Valley.....	35	1,158	Hillsdale.....	496	5,629
Fremont.....	47	1,214	Archer.....	508	6,038
North Bend.....	62	1,297	Cheyenne.....	516	6,075
Schuylerville.....	76	1,373	Hazard.....	523	6,363
Columbus.....	92	1,470	Otto.....	531	6,756
Jackson.....	99	1,508	Granite Cañon.....	536	7,329
Silver Creek.....	109	1,572	Buford.....	542	7,810
Clark's.....	121	1,648	Sherman.....	549	8,271
Lone Tree.....	132	1,724	Harnay.....	558	7,885
Chapman.....	142	1,798	Red Buttes.....	564	7,360
Grand Island.....	154	1,798	Fort Sanders.....	570	7,185
Pawnee.....	162	1,945	Laramie.....	573	7,143
Wood River.....	172	2,012	Wyoming.....	587	7,087
Gibbon.....	183	2,084	Cooper's Lake.....	602	7,062
Kearney.....	191	2,144	Lookout.....	606	7,185
Stevenson.....	201	2,208	Miser.....	614	6,824
Elm Creek.....	212	2,279	Rock Creek.....	623	6,703
Overton.....	221	2,343	Como.....	638	6,692
Plum Creek.....	230	2,408	Medicine Bow.....	645	6,561
Coyote.....	240	2,478	Carbon.....	656	6,760
Willow Island.....	250	2,549	Simpson.....	662	6,907
Warren.....	260	2,608	Percy.....	669	6,958
Brady Island.....	268	2,675	Dana.....	675	6,882
McPherson.....	277	2,735	St. Mary's.....	680	6,757
North Platte.....	291	2,827	Fort Steele.....	696	6,845
Nichols.....	299	2,920	Grennvile.....	704	6,564
O'Fallon.....	308	3,014	Rawlins.....	709	6,735
Alkali.....	322	3,076	Separation.....	723	6,901
Roscoe.....	332	3,143	Creston.....	737	7,030
Ogallalla.....	342	3,228	Wash-a-kie.....	752	6,696
Brûlé.....	351	3,304	Red Desert.....	761	7,708
Big Spring.....	361	3,363	Table Rock.....	775	6,887
Julesburg.....	377	3,538	Bitter Creek.....	785	6,681
Lodge Pole.....	397	3,838	Black Buttes.....	794	6,595
Sidney.....	414	4,111	Point of Rocks.....	805	6,484

Union Pacific Railroad—Continued.

	Miles.	Eleva- tion. <i>Feet.</i>		Miles.	Eleva- tion. <i>Feet.</i>
Salt Wells	817	6,353	Piedmont.....	937	6,528
Rock Springs.....	831	6,272	Aspen	955	7,825
Green River.....	845	6,130	Wahsatch.....	966	6,870
Bryan	858	6,328	Castle Rock.....	975	6,282
Granger.....	876	6,257	Echo	991	5,507
Church Buttes.....	887	6,303	Weber.....	1,007	5,096
Carter.....	904	6,535	Devil's Gate.....	1,019	4,835
Brider.....	913	6,760	Uintah.....	1,024	4,524
Leroy.....	928	7,110	Ogden.....	1,032	4,303

Central Pacific Railroad.

Ogden.....	0	4,303	Humboldt.....	460	4,262
Bonneville	8	4,310	Oreana	482	4,206
Corinne.....	23	4,294	Lovelock's	493	4,100
Blue Creek.....	41	4,360	Brown's	509	3,955
Promontory.....	52	4,943	White Plains.....	521	3,921
Rozel.....	60	4,600	Hot Springs.....	536	4,098
Monument.....	73	4,290	Wadsworth.....	555	4,104
Kelton.....	91	4,500	Clark's	570	4,290
Matlin.....	107	4,821	Camp 37	582	4,400
Terrace.....	121	4,450	Reno	590	4,525
Lucin.....	146	4,400	Verdi California	601	4,915
Tecoma.....	155	4,600	Boca	616	5,560
Montello.....	165	4,800	Truckee.....	625	5,866
Loray	174	5,400	Summit	639	7,042
Toano	183	5,964	Cisco	652	5,911
Pequop	195	6,180	Emigrant Gap	660	5,300
Independence.....	204	6,115	Blue Cañon	665	4,700
Wells	219	5,650	Alta	674	3,625
Tulasco.....	227	5,418	Dutch Flat	677	3,425
Halleck.....	251	5,220	Gold Run	679	3,245
Osino.....	265	5,100	Colfax	690	3,448
Elko.....	275	5,030	Auburn	708	1,385
Moleen	287	5,000	Newcastle	713	920
Carlin	298	4,930	Rocklin	722	269
Be-o-wa-we.....	326	4,717	Junction	726	189
Shoshone	336	4,665	Arcade	736	76
Argenta	347	4,575	Sacramento	744	56
Battle Mountain.....	359	4,534	Stockton	792	46
Stone House	378	4,419	Livermore	835	520
Golgonda	402	4,419	San José	855	114
Winnemucca	419	4,355	San Francisco	882	0
Raspberry	440	4,354			

Saint Paul & Pacific Railroad.

	From St. Paul.	
Low water in Mississippi River at Saint Paul.....	0	676
Saint Paul Depot	0	689
Base of the capitol, Saint Paul	0	782
Bluffs head of Robert street		901
Summit avenue bluff		910
Summit, between Saint Paul and Saint Anthony, 3 feet cut.....	5	
Junction at Saint Anthony	9.5	829
Mississippi River, low water, at Nicollet Island, Saint Anthony	9.5	791
Minneapolis Station	10.5	821
Mississippi River, low water, half-mile below Saint Anthony's Falls	9.5	711½

Saint Paul & Pacific Railroad—Continued.

	From St. Paul.	Eleva- tion.
	Miles.	Feet.
Self's Lake, water.....	17	842
Wayzata Station.....	24	922
Lake Minnetonka, water.....	25	913
Long Lake Station.....	28	940
Crow River crossing, track.....	40	914
Delano.....	40	914
Waverly Station.....	48.5	998
Twelve-mile Creek.....	51.5	986
Howard Lake.....	54	1,040
Smith Lake.....	57	1,040
	59	1,043
Sucker Creek, track.....	60	1,003
Sucker Creek, water.....	60	979
	62	1,068
Cokato Station, at Collingwood Creek.....	64	1,013
	67.5	1,107
Level of marsh.....	68.5	1,078
	69.5	1,108
Darwin, Big Prairie.....	72	1,118
Litchfield Station.....	79	1,116
Swede Grove Station.....	86	1,177
Anderson's Hill, cut fifteen feet.....	89	1,202
Summit, Atwater.....	91	1,198
Cut 10½ feet.....	92	1,228
Highest point on line, cut three feet.....	95.5	1,255
Very rolling surface to Kandiyohi Station.....	98	1,207
Willmar, Foot Lake.....	105	1,115
Saint John's.....	110.5	1,107
Nearly level to Kirkhoven.....	118	1,095
Smooth surface to De Graff Station.....	127	1,047
Sharp summit, cut sixteen feet.....	132	1,052
Gradual descent, smooth surface, to Benson Station.....	134	1,033
Chippewa River, bridge track.....	135.5	1,021
Chippewa River, water.....	135.5	1,012
Gradual ascent, smooth surface, to Randall Station.....	141	1,036
Gradual ascent, smooth surface, to 147-mile post.....	147	1,060
Hancock Station.....	150	1,141
Summit.....	151.5	1,158
Pomme de Terre River, track.....	155.5	1,064
Pomme de Terre River, water.....	155.5	1,053
Morris Station.....	159	1,113
Summit 161-mile post.....	161	1,142
Smooth surface to Douglas Station.....	167.5	1,112
Gradual descent, smooth surface to Herman Station.....	178	1,054
Smooth surface to Mustinka Creek.....	184.5	1,012
Smooth surface to Gorton.....	185.5	1,008
Smooth surface to Tintah.....	194.5	982
Smooth surface to Rabbit Run.....	201	968
Smooth surface to Campbell Station.....	202	968
Smooth surface to Doran Station.....	209	959
Smooth surface to Breckenridge Station.....	217	948

*Branch line of the Saint Paul & Pacific Railroad,
(From Saint Anthony to Brainerd.)*

Junction at Saint Anthony.....	9.5	829
Manomin.....	17	833
Rice Creek, water level.....	17	807
Coon Creek, water level.....	21.5	817
Anoka.....	27	869

Branch line of the Saint Paul & Pacific Railroad—Continued.

	From St. Paul.	Eleva- tion.
	Miles.	Feet.
Rum River, water level.....	27.5	831
Itaska.....	34	886
Elk River Station.....	39	894
Elk River, water level.....	43	881
Big Lake Station.....	48	921
Becker.....	56	963
Clear Lake Station.....	63	984
Saint Cloud, east shore of Mississippi River.....	73.5	1,011
Saint Cloud, west shore of Mississippi River.....	75	1,025
Mississippi River at Saint Cloud, water.....		953
Mississippi River at Sauk Rapids, water.....		982
Sauk Rapids Station.....	76	999
Watab Station.....	82	1,048
Little Rock River, track.....	85	1,015
Little Rock River, water.....	85	1,002
Langola Station.....	89	1,054
Platte River, track.....	95	1,064
Platte River, water.....	95	1,054
Bellevue.....	96	1,075
Smooth surface to Little Falls, track.....	106	1,109
Smooth surface to Belle Prairie.....	111	1,125
Summit.....	118.5	1,167
Fort Ripley.....	120	1,153
Nokay River, water.....	120	1,134
Crow Wing.....	127	1,181
Buffalo Creek.....	133.5	1,198
Buffalo Creek, low water.....	133.5	1,167
Summit between Buffalo and Buckhorn Creeks.....	134.5	1,196
Buckhorn Creek, track.....	136	1,159
Buckhorn Creek, low water.....	136	1,141
Broken surface to Brainerd, Northern Pacific Junction.....	137	1,208

Saint Vincent branch of the Saint Paul & Pacific Railroad.

East Saint Cloud Station.....	74	1,011
Low water in Mississippi River at Saint Cloud.....	74	953
West Saint Cloud.....	75	1,025
Sauk River, track.....	78.5	1,034
Sauk River, first crossing, water.....	78.5	1,017
Sharp Ridge, cut fifteen feet.....	79	1,039
Saint Joe.....	82	1,074
Watab Creek, track.....	83.5	1,058
Sharp Ridge, cut seventeen feet.....	86	1,086
Broken surface to summit.....	87.5	1,136
Broken surface to Avon.....	90	1,116
Broken surface to Two Rivers, water.....	94.5	1,124
Broken surface to Albany.....	96.5	1,187
Broken surface to summit, near 99-mile post.....	99	1,236
Broken surface to Getchell's Creek, water.....	101	1,181
Broken surface to Oakes, a summit.....	103	1,228
Broken surface to Sauk River, second crossing, water.....	106	1,157
Broken surface to Melrose.....	108	1,196
Smooth surface to third crossing of Sauk River, second crossing, track.....	111	1,199
Third crossing of Sauk River, water.....	111	1,187
Broken surface to summit, cut fifteen feet, section 24, township 126, range 34.....	114	1,280
Broken surface to fourth crossing Sauk River, track.....	116	1,226
Sauk River, low water.....	116	1,243
Smooth surface to Sauk Center Station.....	117	1,239
Broken surface, cut of fourteen feet.....	120	1,293
Broken surface to summit, cut of seventeen feet.....	121	1,312

Saint Vincent branch of the Saint Paul & Pacific Railroad.—Continued.

	From St. Paul.	Eleva- tion.
	Miles.	Feet.
Creek, track.....	122.5	1,266
Undulating surface to West Union Station.....	125	1,323
Broken surface to Osakis Station.....	131	1,328
Summit, section 22, township 128, range 36.....	132.5	1,394
Broken surface to 135-mile post.....	135	1,327
Victoria.....	136	1,366
138-mile post.....	138	1,403
Broken surface to creek, track.....	139.5	1,359
Broken surface to Alexandria.....	142	1,382
Very broken surface to Ida Station.....	151	1,402
Broken surface to Chippewa River, track.....	158	1,360
Chippewa River, water.....	158	1,320
Evansville Station, cut twenty-eight feet, fill immediately of fifteen feet.....	160	1,345
Very broken surface to summit, cut thirty feet.....	161	1,369
Very broken surface to Christina Station, cut and fill at Christina of forty-two feet.....	166	1,219
Very broken surface to summit, cut five feet.....	169.5	1,287
Very broken surface to Saint Olloff.....	173.5	1,335
Very broken surface to summit, cut three feet.....	176	1,357
Very broken descent to Pomme de Terre River, track.....	179	1,230
Pomme de Terre River, water.....	179	1,196
Pomme de Terre River, bottom.....	179	1,192
Broken surface to Tumuli Station.....	180	1,196
Broken and irregular descent to Red River Crossing, water.....	186.5	1,062
Red River, bottom.....	186.5	1,017
Red River Falls Station.....	187	1,122
Undulating, slow descent to 192-mile post.....	192	1,099
Section 1, township 133, range 45.....	200	1,067
Smooth surface to 204-mile post.....	204	1,064
Section 15, township 135, range 45.....	210	1,096
Smooth surface to 212-mile post.....	212	1,105
Smooth surface to 216-mile post.....	216	1,029
Smooth surface to section 31, township 137, range 45.....	220	1,019
Smooth surface to Wilson River, track.....	222	1,003
Wilson River, bottom.....	222	988
Smooth surface, slow descent to Glyndon, N. P. R. R. Junction.....	238.5	923
Smooth surface to Buffalo River, track.....	241.5	919
Buffalo River, water.....	241.5	906
Buffalo River, bottom.....	241.5	901
Smooth, level surface, Averill Station.....	246	918
Smooth surface to Felton Station.....	253	916
Smooth surface to Borup Station.....	259	912
Smooth surface to Wild Rice River and Station, track.....	266	910
Wild Rice River, bottom.....	266	896
Wild Rice River, water.....	266	901
Smooth surface to Elm Creek, water.....	268	891
Smooth surface to Stanley Station.....	273	902
Smooth surface to Rolette Station.....	280	894
Smooth surface to Beltrami Station.....	285.5	903
Smooth surface to Sand Hill River, water.....	286	899
Smooth surface to Kittson Station.....	296	886
Smooth surface to top of first bluff, Red Lake River.....	302.5	862
Red Lake River, track on bridge.....	302.5	848
Red Lake River, water level.....	302.5	841
Red Lake River, bottom.....	302.5	824
Top of bluff on north side Red Lake River*	303	869
Smooth surface, gentle ascent to summit.....	308	889
Smooth surface to 310-mile post.....	310	904
Smooth surface to 320-mile post.....	320	886
Smooth surface to 330-mile post.....	330	843
Smooth surface to Snake Hill River, water.....	333.5	841

* The valley is just a mile across, with single well-defined bluffs.

Saint Vincent branch of the Saint Paul & Pacific Railroad.—Continued.

	From St. Paul.	Eleva- tion.
Smooth surface to 340-mile post	Miles. 340	Feet. 851
Smooth surface to Middle River, track	343.5	847
Middle River, water	343.5	834
Middle River, bottom	343.5	831
Smooth surface to section 8, township 157, range 48	350	839
Smooth surface to Tamarack River, track	351	830
Tamarack River, water	351	817
Tamarack River, bottom	351	815
Smooth surface to south branch of Two Rivers, track	375	815
South branch of Two Rivers, water	375	803
South branch of Two Rivers, bottom	375	787
Smooth surface to north branch of Two Rivers, track	380	801
North branch of Two Rivers, water	380	787
North branch of Two Rivers, bottom	380	781
Smooth surface to 392-mile post	392	798
Slow, irregular descent to the immediate bank of Red River, track	394	791
Saint Vincent, bank of Red River	394	792
Saint Vincent, bottom of Red River	394	744
Saint Vincent, high water of 1866	394	787
Saint Vincent, usual water-surface	394	758

NOTE.—From mile-post 131 to 188 there are frequent fills and cuts.

Saint Paul & Sioux City and Sioux City & Saint Paul Railroads.

Belle Plaine	47	781
Blakeley	52	785
East Henderson	58	791
Le Sueur	63	811
Ottawa	69	847
Kasota	77	853
Mankato	86	849
South Bend	90	866
Lake Crystal	100	1,053
Madelia	110	998
Saint James	121	1,058
Butterfield	130	1,163
Mountain Lake	137	1,277
Bingham Lake	143	1,397
Winstrom	148	1,326
Wilder	154	1,423
Heron Lake	160	1,394
Hersey	170	1,465
Worthington	178	1,563
Bigelow	188	1,603
Sibley	196	1,485
Le Mars	245	1,196

Saint Paul, Stillwater & Taylor's Falls Railroad.

Saint Paul (low water in Mississippi River)	0	676
Saint Paul (high water in Mississippi River)	0	697
Junction with Saint Paul & Pacific Railroad	1.5	762
Crossing, Lake Superior & Mississippi Railroad, Phalen's Creek, track		817
Grade of Lake Superior & Mississippi Railroad here is twenty feet lower		797
Phalen's Creek, (bottom,) third crossing	2	791
Broken surface to second crossing of Phalen's Creek, track	3	841
Phalen's Creek, second crossing, bottom	3	826

Saint Paul, Stillwater & Taylor's Falls Railroad—Continued.

	From St. Paul.	Eleva- tion.
	Miles.	Feet.
Broken surface to first crossing of Phalen's Creek, track	3.5	859
First crossing of Phalen's Creek, bottom	3.5	841
Broken surface to creek at Ames's farm, track	4.5	911
Creek at Ames's farm, bottom	4.5	880
Broken ascent to beginning of descent to the Mississippi River, cut fifteen feet	6	976
Broken surface to Tamarack Swamp, track	6.5	966
Tamarack Swamp, natural surface	6.5	961
Summit one-half mile west of Oakdale Station, cut ten feet	8	996
Oakdale Station	8.5	967
Broken surface to the level of Lower Bass Lake	12	874
Level of Upper Bass Lake	12	888
Bass Lake Station	12	921
Nearly level and smooth surface to Weir's Station	13	911
Summit four miles from Stillwater	15	917
Crossing West Wisconsin Railroad, cut seventeen feet	15.5	875
Broken descent to marsh, bottom	17.5	741
Center of gravel ridge one and a half miles from Stillwater, cut fifty feet	17.5	761
Broken descent to high water at Stillwater	19	675
Low water in Saint Croix Lake at Stillwater	19	655

Lake Superior & Mississippi Railroad.

	From Duluth.	
Surface of Lake Superior at Duluth in 1870	0	600
Duluth	0	605
Thomson, Dalles of the Saint Louis River	24	1,027
Highest point on entire line, both of grade and natural surface	33	1,166
Moose Lake Depot	45	1,052
Kettle River Depot, ground a little to the north and south fifteen to twenty feet higher	60	1,112
Hinckley, at Grindstone River	78	1,023
Lowest place between Hinckley and next summit		1,005
Summit	80	1,023
Summit, 20 feet higher than at one-half mile to the north or south	86	985
Pine City, at Snake River	90	944
Two and a half miles south of Snake River, at summit		978
Rush City, at creek*	101	908½
Goose Lake		886
Between Goose Lake and North Branch		915
North Branch, at creek	113	883
Between North Branch and Wyoming		906
Wyoming, at the river	125	887
Wyoming Depot	125	897
Forest Lake Depot	129	904
Summit between Forest Lake and Rice Creek	132	953
Rice Creek	133½	916
Centreville Depot	138	927
Junction at White Bear Lake	143	920
Summit between White Bear Lake and Saint Paul, eight feet cut	145½	959
Between Phalen's Lake and Saint Paul	151½	870
Lowest known water in Mississippi River at St. Paul (extreme range twenty-one feet)	155	676
Highest known water in Mississippi River at Saint Paul	155	697

* Descending gradually from Rush City to Goose Lake.

† Country generally level for five miles south of Rice Creek.

Northern Pacific Railroad.

	From Duluth.	Eleva- tion.
	Miles.	Feet.
Duluth, level of Lake Superior	0	600
Junction, natural ground.....	24	1,079
Junction, grade.....	24.2	1,080
Otter Creek, bed of creek.....	27	1,126
natural ground.....	34	1,333
Norman, grade.....	34.1	1,322
Kettle River, bed of river.....	41.7	1,285
natural ground.....	44.7	1,329
Island Lake, grade.....	46	1,305
Tamarack River, bed of river.....	51.7	1,285
natural ground.....	51.9	1,309
Sicottes, grade.....	55.2	1,278
Hay River, bed of river.....	58.1	1,265
natural ground.....	62.2	1,222
Sandy River, bed of river.....	62.8	1,238
natural ground.....	65.4	1,213
Kimberly, grade.....	72.3	1,212
Rice River, bed of river.....	73.8	1,260
natural ground	76	1,231
Sisabagamá Creek, bed of creek.....	76.5	1,203
natural ground	80.8	1,248
Aiken, grade.....	83.5	1,200
Mud River, bed of river	85.3	1,235
natural ground	87.1	1,202
Cedar River, bed of river.....	87.7	1,186
natural ground	90.2	1,218
Withington, grade.....	91.8	1,193
natural ground	97.5	1,299
Brainard, grade.....	98.2	1,266
Mississippi River, bed of river.....	103.6	1,297
Banks of the Mississippi River, grade.....	115	1,204
Frenchman's, grade.....	115.5	1,138
natural ground	120.6	1,199
Gull River, bed of river.....	120.9	1,206
natural ground	122.5	1,161
Pillager Creek, bed of creek.....	124.7	1,204
Pillager, grade.....	127.6	1,166
Pillager, natural ground.....	128.2	1,180
Crow Wing River, bed of river.....	135.5	1,222
Motley, grade.....	136.5	1,197
natural ground	137.1	1,220
Hayden's Branch, bed of creek.....	141.5	1,250
natural ground	143.3	1,224
Aldrich, grade	150.9	1,342
Partridge River, bed of river	151.3	1,326
natural ground	151.5	1,304
Wing River, bed of river	155.3	1,347
natural ground	156.5	1,312
Union Creek, bed of creek	158.2	1,357
Wadena, grade	161.3	1,320
natural ground	161.9	1,349
Leaf River, bed of river	164.1	1,354
Frazee, grade	166.4	1,307
natural ground	174.8	1,409
Otter Tail River, bed of river	177.2	1,431
Perham, grade	183.4	1,318
natural ground	185.5	1,366
Otter Tail River, bed of river	190.7	1,379
Hobart, grade	192.6	1,335
natural ground	195.4	1,384
Otter Tail River, bed of river	196.1	1,402
	196.2	1,353

Northern Pacific Railroad—Continued.

	From Duluth.	Eleva- tion.
Otter Tail River, natural ground.....	<i>Miles.</i> 201. 4	<i>Feet.</i> 1, 420
Pelican River, bed of river.....	205. 8	1, 337
Detroit, grade.....	206. 6	1, 362
natural ground	210. 7	1, 406
Oak Lake, grade.....	210. 9	1, 367
Audubon, grade.....	213. 6	1, 308
natural ground	214. 7	1, 267
natural ground	217. 0	1, 348
Lake Side, grade.....	219. 2	1, 333
Hay Creek, bed of creek	224. 2	1, 200
Hay Creek, bed of creek.....	226. 6	1, 167
Buffalo River, bed of river	227. 4	1, 150
Buffalo River, bed of river	230. 1	1, 132
Hawley, grade.....	230. 4	1, 150
natural ground	231. 4	1, 195
Muskoda, grade.....	234. 9	1, 083
Buffalo River, bed of river	238. 3	938
Red River Flats, natural ground.....	242	978
Glyndon, grade.....	243. 2	923
Moorhead, grade	252	904
Red River, bed of river	252. 2	857
Red River Banks, natural ground		902
First Cheyenne crossing.....	258	900
Summit between two crossings.....	306	1, 445
Second Cheyenne crossing.....	311	1, 230
Lake Eckelson	329	1, 418
Summit between Cheyenne and James Rivers.....	342	1, 495
James River.....	346	1, 393
On Coteau du Missouri.....	366	1, 861
Divide on Coteau du Missouri	387	1, 795
Ou Coteau du Missouri	425	1, 873
Missouri River, at mouth of Heart River.....	440. 5	1, 700

Southern Minnesota Railroad.

Grand Crossing, Mississippi River, opposite La Crosse.....	626
Rushford.....	711
Lanesborough.....	831
Isinour's, section 20, township 103, range 10.....	888
Fountain	1, 289
Grand Meadow, section 24, township 103, range 15.....	1, 325
Section 13, township 103, range 16	1, 402
Ramsey, grade Milwaukee & Saint Paul Railroad.....	1, 207
Hayward	1, 240
Winnebago City	1, 089
Water in Blue Earth River, one mile west of Winnebago City.....	1, 004
Section 25, township 104, range 30	1, 106
Section 1, township 103, range 33	1, 215
Section 25, township 104, range 36	1, 381
Water in Des Moines River	1, 280
Heron Lake	1, 361
Graham Lake	1, 403
Section 3, township 102, range 22	1, 315
Section 33, township 101, range 21	1, 250
Section 36, township 101, range 24	1, 222
Section 31, township 101, range 24	1, 245

SECTION IV.

BAROMETRIC PROFILES.

Section across the table land of Mexico, (Humboldt.)

	Miles.	Eleva-tion.
		Feet.
Direction, north 65° west:		
Vera Cruz.....	0	0
Cerro Gordo	42	224
Xalapa	57	479
San Miguel el Soldado	62	581
Parage de Carros	69	7,392
Las Vigas	72	7,821
El Manzanillo	78	7,879
Rio Frio.....		7,661
Direction, south 52° west:		
Cruz Blanca		7,699
Perote	85	7,724
El Porta Chuello	95.5	7,839
Venta de Sotto	100.5	7,686
Venta de el Ojo de Agua.....	112.5	7,469
El Pinal	123	8,364
Acaxete	130	7,277
Cocosingo	137	7,603
Direction, north 76° west:		
El Puebla de los Angeles.....	152	7,200
San Francisco Ocotlan	162.5	7,680
Saint Martin	178.5	7,712
Venta de Tesmelucoes	187.5	8,269
Venta de el Agua	191	9,476
Venta de Rio Frio	194.5	10,123
Baraneas de Joannes	196.5	10,487
Venta de Cordoba	205.5	8,697
Venta de Chalco	212.5	7,711
City of Mexico.....	230	7,469
Direction, south 14° west:		
San Augustin de las Cuevas	239	7,615
La Cruz del Marques	251	9,821
Guchilaque	261	8,013
Cuernavaca	265	5,429
Puentia de Istla	288	3,223
Tepecuacuileca	312.5	3,319
Fuenta d'Estola	331.5	2,699
Mescala	356	1,695
Sopilote	365	3,306
Sampango	374	3,587
Chilpansingo	379	4,527
Masatlan	386	4,169
Acaguisotla	391	3,223
Alto de Caxones	393	3,741
Venta de la Moxonera	402	2,539
Venta de Tierra Colorada	407	1,311
Val del Papagayo	409	627
Alto del Peregrino	411	1,138
Val del Peregrino	413	544
Alto de los Pozuellos	417	1,471
El Exido	433	1,362
Acapulco	442	0

Plateau of Mexico—Line from the City of Mexico to Santa Fé, N. M.

	Miles.	Eleva- tion.
	F. eet.	
Mexico	Humboldt	7,469
Tula	Humboldt	6,733
San Juan del Rio	Humboldt	6,490
Queretaro	Humboldt	6,362
Celaya	Humboldt	6,017
Salamanca	Humboldt	5,761
Guanajuato	Humboldt	6,836
Silao	Burkart	5,911
Villa de Leon	Burkart	6,133
Lagras	Burkart	6,376
Aguas Calientes	Burkart	6,261
San Luis Potosi	Burkart	6,090
Zacatecas	Burkart	8,038
Fresnillo	Burkart	7,244
Durango	Oleiza	6,848
Parras	Wizlizenus	4,985
Saltillo	Wizlizenus	5,240
El Bolson de Mapimi	Wizlizenus	4,100
Chihuahua	Wizlizenus	4,638
Cosiquiriachi	Wizlizenus	6,273
Paso del Norte	Wizlizenus	3,810
Santa Fé	Wizlizenus	7,047

Survey of the Mexican boundary, by Major W. H. Emory.

Fort Brown, Texas		165
Ringgold Barracks		522
Edinburgh		422
Fort McIntosh		806
Fort Duncan		1,461
San Antonio		579
Castroville		672
Quihi		856
Rio Seco		937
Comanche Creek		924
Camp near Fort Inge		911
Camp near Nueces		939
Elm Creek		1,094
Zoqueté Creek		983
San Felipe		818
Painted Caves		952
San Pedro River		1,810
Second crossing San Pedro River		1,843
Head of San Pedro River		1,681
Howard's Spring		2,054
Live Oak Creek		2,083
Pecos		2,027
Escondido Spring		2,806
Leon Spring		3,098
Limpia		4,004
Head of Limpia		4,688
Eagle Spring		4,536
Station near Presidio del Norte		2,779
Rio Bravo (where road from San Antonio strikes it)		3,484
San Elceario		3,607
Initial point on Rio Bravo (parallel $31^{\circ} 47' N.$)		3,684
Frontera		3,796
Neides's Spring		4,310
Cook's Spring		4,777
Santa Rita del Cobre		6,106

Survey of the Mexican boundary, by Major W. H. Emory.—Continued.

	Miles.	Eleva- tion.
Ojo de Vaca		<i>Feet.</i>
Carrizalillo		4,989
Espia		4,455
Ojo de Inez		4,028
Ojo de Perro		5,293
Alamo de Hueco		4,692
Ojo de Picacho		4,650
Salt Lake (parallel 32° 22' N.)		4,694
Salt Lake Spring (Playa de los Pimos)		3,994
Quercus Cañon		4,194
Camp on Gila, near Mount Graham		4,170
Summit of San Luis Mountain		2,976
Ojo de San Luis		5,819
Guadalupe Cañon		5,044
San Bernardino		4,448
Agua Prieta		3,677
Spring at head of Rio San Pedro		4,017
Rio San Pedro (near parallel 32° 22' N.)		4,384
Summit of pass near Santa Cruz		3,718
Santa Cruz		5,470
Los Nogales		4,498
Junction of Gila and Colorado		3,836
New initial point on Colorado		275
		156

Route of Lieutenant Emory, from Fort Leavenworth, Kansas, to San Diego, California.

Fort Leavenworth	0	
Camp 2, on Stranger's Creek		1,044
Camp 3, on Kansas River		850
Camp 4, Oregon Trail, on the Makurissi	43	781
Camp 5, on the Santa Fé road		1,060
Camp 6, on 110 Creek		1,179
Camp 8, at Big John Spring	124	1,456
Camp 9, at Diamond Spring	144	1,511
Camp 10, on Cottonwood Stream	173	1,372
Camp 12, on Little Arkansas		1,695
Camp 13, on branch of Cow Creek	231	1,703
Camp 14, on Arkansas River where the Santa Fé road first strikes it	253	1,642
Camp 15, on Arkansas River		1,840
Camp 16, on the Pawnee Fork	288	1,932
Camp 19, on the Arkansas		2,196
Camp 20, in Jackson Grove	352	2,519
Camp 21, on the Arkansas		2,652
Camp 22, on the Arkansas		2,940
Camp 23, on the Arkansas	418	2,988
Camp 24, on the Arkansas		3,268
Camp 25, on the Arkansas		3,319
Camp 26, on the Arkansas	482	3,396
Camp 27, on the Arkansas		3,594
Camp 28, on the Arkansas		3,779
Camp 29, on the Arkansas		3,862
Camp 30, near Bent's Fort	564	3,942
Camp 31, on the Timpa		4,523
Camp 32, on the Timpa	598	4,761
Camp 33, at Hole in the Prairie		5,560
Camp 34, on the Purgatory	651	5,896
Camp 35, in the valley of the Raton	668	7,169
Summit of the Raton		7,754
Camp 36, on the Canadian	685	6,112

Route of Lieutenant Emory, from Fort Leavenworth, &c.—Continued.

	Miles.	Eleva- tion. <i>Feet.</i>
Camp 38, on Cummaron Citon	715	6,027
Camp 39, on the Ocaté .....	.....	6,946
Camp 40, at the Pools	765	6,670
Camp 41, on the Sapillo .....	.....	6,395
Camp 42, at the village of the Vegas	792	6,418
Camp 43, at Vernal Springs	811	6,299
Camp 44, one-half mile south of the Pecos .....	.....	6,346
Camp 45, on the Pecos, near Pecos Village .....	.....	6,366
Camp 48, two miles below San Felipe .....	.....	5,158
Camp 51, near Pualta .....	.....	4,862
Camp 58, on the Rio del Norte, where the road strikes it .....	.....	4,910
Camp 59, one mile south of San Dia .....	.....	4,846
Camp 61, seven miles below Albuquerque, on the Rio del Norte .....	.....	4,756
Camp 62, seven miles below Isoletta, on the Rio del Norte	959	4,636
Camp 63, nine miles below Tomé .....	.....	4,670
Camp 66, near Socorro .....	.....	4,563
Camp 70, on the east side of the Rio del Norte .....	.....	4,241
Camp 75, in the mountains, between the Rio del Norte and the copper mines	1,154	5,426
Camp 76, near the copper mines .....	.....	6,167
Camp 78, on the Gila	1,209	4,347
Camp 79, on the Gila .....	.....	4,096
Camp 80, on the Gila .....	.....	3,989
Camp 81, on the Gila	1,259	3,732
Camp 82, on the Gila .....	.....	3,615
Camp 83, on the Gila	1,297	3,147
Camp 84, on the Gila .....	.....	2,969
Camp 85, on the Gila .....	.....	2,852
Camp 86, on the Gila	1,360	2,674
Camp 87, on Rio San Francisco, two miles from its mouth	1,369	2,557
Camp 89, on Disappointment Creek	1,390	3,781
Camp 90, on the Gila .....	.....	2,172
Camp 91, on the San Pedro	1,428	2,115
Camp 92, on the Gila .....	.....	2,122
Camp 93, on the Gila	1,457	1,751
Camp 94, Carson's Plains, on the Gila .....	.....	1,596
Camp 95, Carson's Plains, on the Gila	1,494	1,419
Camp 96, in the Pimos Village, on the Gila .....	.....	1,308
Camp 99, on the Gila	1,561	845
Camp 100, on the Gila .....	.....	501
Camp 101, on the Gila	1,600	293
Camp 102, on the Gila .....	.....	231
Camp 103, on the Gila	1,639	236
Camp 104, on the Gila .....	.....	248
Camp 105, on the Gila	1,665	253
Camp 106, on the Gila, near its mouth	1,687	254
Camp 108, on the Jornada .....	.....	210
Camp 109, on the Jornada .....	.....	176
Camp 110, at a salt lake on the Jornada .....	.....	52
Camp 111, on the Jornada	1,786	445
Camp 112, Valla Citron	1,802	1,539
Divide .....	.....	2,670
Camp 114, at Warner's Agua Caliente	1,837	3,013
Camp 115, Santa Isabella, on Captain Storer's Ranch .....	.....	3,050
Camp 117, San Pascual .....	.....	716
San Diego	1,916	30

*Route of Lieutenant Parke, from San Diego, California, to Gila River.
(Pacific Railroad Report, Vol. VII.)*

	Miles.	Eleva- tion.
		Feet.
Bay of San Diego	0	0
Mission of San Diego	7	64
Outlet Cajon Gap	10	101
Head Cajon Gap	12	283
Cajon Rancho	20	412
Capitan Grande (Indian village)	32	730
Head Oakwood Cañon	47	2,985
Santa Isabel Rancho	49	2,957
Santa Isabel Summit	51	3,360
San José	55	2,768
Warner's Rancho	59	3,022
Warner's Pass	64	3,630
San Felipe	75	2,455
Mouth of cañon (desert valley)	80	1,920
Gorge of valley	87	1,476
Base of mountain (Colorado Desert)	99	680
Arroyo of Carrizo Creek (Colorado Desert)	110	50
Arroyo of New River (Colorado Desert)	130	-100
Near Cook's Well (Colorado Desert)	171	500
Mouth of Yuma River (at Fort Yuma)	189	180

Route of Captain Pope. (Pacific Railroad Report, Vol. II.)

Red River, near Preston		641
Preston	0	790
Big Mineral	15	1,228
East edge of Lower Cross Timbers	24	1,365
Clear Fork of Trinity	46	1,370
Elm Fork of Trinity	57	1,602
East edge of Upper Cross Timbers	65	1,783
West Fork of Trinity	131	1,524
Divide between Brazos and Trinity Rivers	138	1,707
Clear Fork	187	2,119
Divide between Colorado and Brazos Rivers	285	4,237
Colorado River	308	3,989
Sulphur springs near border of Llano Estacado	352	4,277
East margin of Llano Estacado	355	4,430
Summit of Llano Estacado	443	4,707
West margin of Llano Estacado	474	4,144
Pecos at mouth of Delaware Creek	476	4,069
Head-springs of Delaware Creek	507	4,172
Summit of Guadalupe Pass	531	5,717
Ojo del Cuerbo	554	3,893
Sierra de los Alamos	589	4,568
Summit of Hueco Pass	605	4,812
Hueco Tanks	612	3,935
Molino, on Rio Grande (near El Paso)	636	3,830

Route of Lieutenant Whipple. (Pacific Railroad Surveys, Vol. IV.)

Napoleon, Arkansas		142
Little Rock, Arkansas		351
Fort Smith	0	466
Camp Creek (from Fort Smith)	23	568
First camp on Sans Bois Creek	49	552
Santa Rita Creek	64	680
La Honda	79	632

Route of Lieutenant Whipple—Continued.

	Miles.	Eleva-tion.
		Feet.
Shawnee Village	117	812
Head of Boggy River	146	917
Topofki Creek	164	1,152
Beaversville	177	1,083
Little Creek	194	1,199
First camp on Walnut Creek	207	1,137
Second camp on Walnut Creek	218	1,440
Branch Creek	235	1,402
Deer Creek	249	1,392
Deer Creek Spring	259	1,692
Natural Mound Creek	277	1,735
Gypsum Creek	292	1,711
Comet Creek	305	1,614
Silver Creek	316	1,803
Oak Creek	329	1,748
Epsom Spring	343	2,171
Sweet Water Run	355	2,214
Canadian River	372	2,162
Mouth of Wolf Creek	385	2,319
Mouth of Wine Creek	403	2,454
Mouth of Valley Creek	414	2,505
Mouth of Spring Creek	428	2,678
Llano Estacado:		
Last camp on Canadian River	447	2,847
Highest intermediate point		3,276
White Sandy Creek	463	3,184
Divide		3,389
Shady Creek	482	3,265
Divide		3,536
Beautiful View Creek	498	3,405
Divide		3,804
Rincon de la Cruz	515	3,778
Divide		4,070
Rocky Dell Creek	540	3,932
Divide		4,056
Cañada Truxillo	559	3,938
Divide		4,253
Branch of Tucumcari Creek	582	4,125
Tucumcari Creek	601	4,262
Laguna Colorado	620	4,587
Arroyo Cuerbito	639	4,848
Hurrah Creek	651	5,047
Sheep Spring	671	5,464
Anton Chico	678	5,373
Cañon Blanco	698	6,320
Laguna Blanco	713	6,796
San Pedro Pass	731	6,251
San Antonio	753	6,409
Albuquerque	769	5,026
Atrisco	771	5,033
Isleta (on river bank)	783	4,910
Isleta (top of bluff)		5,052
Divide		5,575
Rio Puerco (in river bed)	804	5,193
Divide		5,705
Rio San José (near ruins of Rita)	822	5,556
Covero	835	5,880
Hay Camp	848	6,081
Campbell's Pass		6,952
East slope of Sierra Madre	865	7,031
Summit (on the road)		8,076
Agua Fria	872	7,757
Inscription Rock (El Moro)	888	7,238

Route of Lieutenant Whipple—Continued.

	Miles.	Elevation. Feet.
Ojo del Pescado.....	902	6,551
Tuni River.....	912	6,336
Arch Spring.....	921	6,350
Cedar Forest.....	932	6,162
Jacob's Well.....	951	5,973
Navajo Springs.....	958	5,655
Carriso Creek.....	961	5,550
Lithodendron Creek.....	980	5,500
First camp on Flax River.....	1,003	5,016
Eighth camp on Flax River.....	1,060	4,594
Cosnino Caves.....	1,087	6,139
Near San Francisco Springs.....	1,098	6,666
Laroux's Spring.....	1,107	7,378
San Francisco Peak.....		12,052
Junction of Cañon Diablo and Flax River.....		4,594
Lava Creek.....	1,139	6,318
Partridge Creek.....	1,156	5,122
Val de China (near Picacho).....	1,172	4,734
Pueblo Creek.....	1,189	5,203
First camp on Williams's River.....	1,201	5,752
Fourth camp on Williams's River.....	1,218	4,814
White Cliff Creek.....	1,244	3,526
Fifth camp on Williams's River.....	1,267	2,243
Tenth camp on Williams's River.....	1,295	1,308
Thirteenth camp on Williams's River.....	1,310	1,014
Sixteenth camp on Williams's River.....	1,329	694
Mouth of Williams's River.....	1,346	378
First camp on Colorado River.....	1,350	398
Last camp on Colorado River.....	1,397	430
Yucca Grove.....	1,437	4,382
Rock Spring.....	1,444	4,896
Near Marl Spring.....	1,461	3,793
Soda Lake.....	1,488	1,002
First camp on Mohave River.....	1,501	1,216
Fifth camp on Mohave River.....	1,560	2,474
Northeast slope of San Bernardino Mountain.....	1,583	3,442
Summit Cajon Pass.....		4,560
Cajon Creek.....	1,597	2,527
Cocomongo Creek.....	1,611	1,223
San Gabriel Creek.....	1,635	249
Near Los Angeles.....	1,647	352
Los Angeles.....	1,649	250
San Pedro.....	1,673	30

Route of Captain Gunnison and Lieutenant Beckwith. (Pacific Railroad Report, Vol. II.)

Low-water mark at St. Louis, Missouri.....	0	375
Three miles west of Westport.....	3	990
Pawnee Fork.....	297	1,962
First Coon Creek.....	318	2,004
Second Coon Creek.....	337	2,245
Near Fort Atkinson, Arkansas River.....	365	2,331
Camp 22, on Arkansas River.....	391	2,431
Camp 23, on Arkansas River.....	410	2,556
Camp 24, on Arkansas River.....	433	2,692
Camp 25, on Arkansas River.....	454	2,852
Camp 26, on Arkansas River.....	479	3,047
Big Timbers, on Arkansas River.....	501	3,166
Camp 28, on Arkansas River.....	521	3,328

Route of Captain Gunnison and Lieutenant Beckwith—Continued.

	Miles.	Eleva-tion.
Camp 29, on Arkansas River.....	544	3, 537
Near Bent's Fort	559	3, 671
Camp 32, ford of Arkansas River.....	593	4, 371
Apishpa River.....	621	4, 860
Camp 35, plain near Apishpa River.....	636	5, 702
Camp 36, plain near Cuchara River.....	653	5, 851
Camp 37, on Cuchura River.....	664	6, 109
Huerfano River, near the butte.....	674	6, 099
Camp 39, on Huerfano River.....	688	6, 976
Base of the Sierra Blanca	696	7, 463
Camp 41, in Sangre de Cristo Pass	701	8, 757
Top of the mountain		9, 852
Summit of the pass.....		9, 396
Camp 42, Sangre de Cristo Valley.....	705	9, 041
Camp 43, Sangre de Cristo Valley.....	711	8, 412
Near old Fort Massachusetts.....	721	8, 365
White Mountain Springs.....	732	7, 829
Near Roubideau's Pass	745	7, 638
Near Williams's Pass	755	7, 723
Chatillon's Creek	764	7, 503
Leroux's Creek	777	7, 698
Homan's Creek	782	7, 548
Sahwatch Creek	797	7, 567
Foot of Cochetopa Pass.....	824	8, 960
Summit of Cochetopa Pass.....	828	10, 032
Camp 55, near Camp Rock.....	850	8, 515
Cochetopa Creek	866	7, 681
Gunnison River	880	7, 428
Camp 58, Gunnison River.....	894	7, 293
Summit of right bank of Lake Fork.....		8, 171
Lake Fork (on stream).....	902	7, 236
Mountain Creek	907	8, 054
Summit of mesa		8, 286
Cebolla Creek, first branch	920	7, 026
Crossing of Cedar Creek.....	929	6, 962
Camp 65, Uncompahgre River	949	6, 085
Camp 66, Uncompahgre River	967	5, 332
Kahnah Creek	996	4, 764
Camp 69, Grand River.....	1, 010	4, 449
Camp 70, Grand River.....	1, 019	4, 410
Little Salt Creek	1, 033	4, 274
Bitterwater River	1, 055	4, 486
Rainwater Creek	1, 071	4, 454
Camp 75, Rainwater Creek	1, 093	4, 642
Camp 77, Green River	1, 122	3, 873
Camp 78, Green River	1, 123	3, 828
Akanaquint Spring	1, 139	4, 457
Camp 80, Dry Creek	1, 155	4, 753
White River	1, 165	4, 592
Clever Creek	1, 174	4, 958
Standingwater Creek	1, 198	5, 719
San Rafael Creek, second branch	1, 211	5, 429
Garambulla River	1, 223	5, 729
Dividing ridge	1, 230	6, 246
Big Rock Creek	1, 236	5, 958
Oak Springs	1, 252	6, 789
Summit Wahsatch Pass	1, 253	7, 820
Salt Creek	1, 263	6, 977
Swambah Creek	1, 268	7, 623
Ungottahbikin Creek	1, 276	6, 551
Sevier River	1, 291	5, 019
San Pete Creek	1, 303	4, 960
Camp 94, Sevier River	1, 322	4, 869

Route of Captain Gunnison and Lieutenant Beckwith—Continued.

	Miles.	Eleva-tion.
Camp 95, north bend, Sevier River.....	1,324	4,783
Summit of ridge north of Lake Valley.....	1,329	5,376
Lake Valley.....	1,336	5,237
Summit of ridge south of Lake Valley.....	1,339	5,871
Cedar Springs.....	1,348	5,131
Camp 98, Sevier River.....	1,374	4,692
Pioneer Creek.....	1,420	4,921
Nephi.....	1,473	4,938
Payson	1,498	4,541
American Fork.....	1,531	4,596
Willow Creek	1,547	4,733
Cottonwood Creek.....	1,558	4,241
Salt Lake City	1,568	4,351

Route of Lieutenant Beckwith, from Salt Lake City to Green River.
(Pacific Railroad Report, Vol. II.)

Salt Lake City	0	4,351
Session Settlement	10	4,183
Weber River.....	29	4,430
Weber River (Camp 2).....	37	4,842
Dry Creek	58	5,419
White Clay Creek	64	5,692
Sulphur Creek	104	7,495
Divide between Bear and Muddy Rivers	110	8,133
Muddy River.....	116	7,779
Divide of Muddy and Black's Forks.....	121	8,374
Black's Fork	125	7,880
Henry's Fork	156	7,137
Dry Timber Creek	163	7,025

Route of Lieutenant Beckwith, from Green River to Salt Lake City.
(Pacific Railroad Report, Vol. II.)

Green River	0	
Pass between Smith's and Henry's Forks.....	32	7,530
Smith's Fork	54	6,971
Divide between Muddy and Black's Forks	65	7,447
Muddy Creek	70	6,964
Bear River.....	94	7,196
White Clay Creek	105	7,009
White Clay Creek	114	6,535
Weber River	146	5,672
Weber River, Kamas Prairie.....	158	6,320
Divide on Kamas Prairie		6,505
Bank of Timpanogos River.....	167	6,243
Timpanogos River.....	172	6,056
Head of cañon of same.....	188	5,485
Timpanogos River.....	199	5,057
American Fork	213	4,596

Route of Lieutenant Beckwith, from Salt Lake City to Fort Reading, California.
(Pacific Railroad Report, Vol. II.)

Salt Lake City	0	4,351
Mountain Creek	71	4,444
Dry Creek	81	5,470
Summit of Cedar Mountain Pass	88	6,364

Route of Lieutenant Beckwith, from Salt Lake, &c.—Continued.

	Miles.	Eleva-tion.
Fish Creek.....	154	5, 077
Franklin River	239	6, 004
Franklin River	254	6, 061
Pass in Humboldt Mountains.....	264	6, 579
Pass in Humboldt Mountains.....	331	6, 848
South Fork of Humboldt River.....	357	6, 066
Summit of Quartz Mountain.....	395	7, 615
Agate Pass	396	5, 006
Humboldt River	524	4, 141
Humboldt River Crossing	531	4, 147
Lassen's Meadows	534	4, 152
Valley of Mud Lake	632	4, 134
East base of Sierra Nevada	642	4, 118
Foot of Madelin Pass, Smoky Creek.....	661	4, 370
Madelin Pass.....	674	4, 914
Summit of Madelin Pass.....	684	5, 668
Broad Summit of Sierra Nevada.....	686	5, 620
Sacramento River.....	746	4, 472
Head of upper cañon of same	765	4, 154
Foot of upper cañon of same	779	3, 622
Head of second cañon (mouth of Fall River)	792	3, 250
Foot of second cañon	802	2, 937
Mouth of Canoe Creek.....	806	2, 867
Sacramento River.....	829	2, 177
Sacramento River.....	836	1, 730
Sacramento River.....	863	1, 156
Sacramento River.....	868	1, 078
Dribblesby's Ferry.....	878	954
Mouth of McCloud's River.....	883	922
Sacramento River.....	895	837
Fort Reading.....	918	675

Route of Lieutenant Beckwith, from Mud Lake to Fort Reading, via Nobles Pass.

Mud Lake	645	4, 079
Honey Lake	703	4, 095
Willow Creek	714	4, 080
Roop's Ranch	723	4, 181
Divide between Susan River and Summit Creek	743	5, 454
Divide between Summit and Pine Creeks	752	5, 802
Black Butte Creek	767	5, 085
Wolf Creek	791	5, 983
Western summit of Sierra Nevada	793	6, 074
Battle Creek	798	5, 825
Fort Reading.....	841	675

Route of Lieutenant Williamson, from Martinez, near Benicia, to Fort Yuma, California. (Pacific Railroad Report, Vol. V.)

Martinez.....	0	-----
Livermore's Ranch.....	40	-----
Entrance to Livermore's Pass	44	481
Summit of Livermore's Pass	48	686
Elk Horn	55	89
Grayson, on San Joaquin River.....	82	-----
Fort Miller, on San Joaquin River	194	402
Summit of Tejon Pass.....	386	5, 364
Eastern base of Sierra Nevada	393	3, 483
Summit of San Francisquito Pass	411	3, 437

Route of Lieutenant Williamson, from Martinez, &c.—Continued.

	Miles.	Eleva-tion.
		Feet.
Summit of San Fernando Pass	434	1,940
Mission of San Fernando	440	1,048
San Bernardino	535	1,118
Summit of San Gorgonio Pass	562	2,808
Hot Spring	588	572
Deep Well	598	160
Cohuilla Village	614	85
Salt Creek	656	—70
San Diego	0	-----
Summit of Warren's Pass	69	3,780
San Felipe (Indian village)	79	2,176
Divide between San Felipe and Carrizo Creeks	88	-----
Last water in Carrizo Creek	116	431
Big Laguna	140	—70
Alamo Mocho	164	—70
Cook's Wells	186	62
Algodones	197	46
Camp near Pilot Knob	202	115
Fort Yuma (75 feet above river)	208	108

Route of Lieutenant Williamson, from Benicia, California, to Fort Vancouver. (Pacific Railroad Report, Vol. VI.)

Benicia	0	-----
Camp 2, near Cordelia	15	69
Camp 3, near Vacaville	26	304
Cache Creek	53	295
Camp 5, near Nicholas	76	289
Camp 6, opposite Marysville	94	281
Camp 7, near Feather River	100	252
Camp 8, near Hamilton	115	260
Chico Creek	137	308
Deer Creek	157	363
Antelope Creek	176	420
Fort Reading	200	518
Mouth of McCloud's River	235	922
Camp 19, near Pit River	314	2,784
Summit of Stoneman's Ridge	320	4,080
Camp 20, near mouth of Fall River	325	3,304
Camp 21, near Upper Cañon	338	3,346
Last camp on Pit River	369	4,212
Spring Branch	380	4,876
Wright Lake	410	4,470
Camp 26, near Natural Bridge	435	4,014
Divide	460	4,177
Upper Klamath Lake	476	4,131
Camp 31, Klamath River	506	4,437
Camp 34, Klamath Marsh	523	4,526
Water-hole	541	4,864
Des Chutes River	560	4,411
Near source of Des Chutes River	577	4,592
Summit Pass (through Cascade Mountains)	585	5,595
Middle fork of Willamette River	600	2,788
Camp 46, middle fork	626	1,154
Camp 48, first settlement	650	738
McKenzie's Fork	674	512
Calapooya Creek	691	440
North Fork of Santiam River	721	448
Opposite Portland	779	66
Opposite Vancouver	786	105

*U. S. Geological Survey of the Territories—Prof. F. V. Hayden.
From Ogden, Utah, to Fort Ellis, Montana.*

	Miles.	Eleva- tion.
Ogden, camp	0	4,517
Water Tank, near Saline Springs	12	4,191
Willard City	16	4,350
Second bridge over Box Elder Creek	25	4,762
Copenhagen	27	4,999
Divide between Box Elder Creek and Bear River	31	5,615
Wellsville	40	4,568
Logan	49	4,557
Hyde Park	55	4,553
Richmond	64	4,641
Franklin	70	4,552
Bear River Bridge	81	4,543
Clifton	87	4,893
Oxford	93	4,862
Divide between Bear and Port Neuf Rivers	94	5,042
Red Rock Ranch	101	4,711
Divide between Ross Fork and Blackfoot Fork	171	5,072
Taylor's Bridge, over Snake River	203	4,627
Market Lake	223	4,795
Desert Wells	236	4,816
Camas Creek Ranch	246	4,722
Dry Creek stage station	268	5,689
Pleasant Valley stage station	276	6,086
Continental Divide	286	6,480
Junction stage station	294	6,329
Divide between Willow and Red Rock Creeks	296	6,268
Red Rock Creek	299	6,041
Divide between Red Rock and Big Sage Creeks	303	6,307
Divide between Big Sage and Black-tail Deer Creeks	316	7,044
Black-tail Deer Creek	323	5,973
Divide between Black-tail Deer and Stinkingwater Creeks	330	6,657
Mouth of Sweetwater Cañon	334	5,872
End of Sweetwater Cañon	336	5,607
Divide between Stinkingwater and Alder Creeks	356	6,492
Nevada City	359	5,548
Virginia City	360	5,713
Divide between Madison and Jefferson Rivers	364	6,857
Madison River	372	5,177
Meadow Creek	381	5,086
Divide between Meadow and Hot Spring Creeks	384	5,836
Hot Spring Creek	387	4,804
Madison River Bridge	397	4,342
Divide between Madison and Gallatin Rivers	411	4,834
West Gallatin River Bridge	418	4,618
Middle Gallatin River	419	4,587
Bozeman	426	4,655
Fort Ellis	430	4,789

*U. S. Geological Survey of the Territories—Prof. F. V. Hayden,
From Fort Ellis, Montana, to Fort Bridger, Wyoming.*

	Miles.	Eleva-tion.
		<i>Feet.</i>
Fort Ellis.....	0	4,789
Hamilton.....	22	4,357
Allen's Ranch.....	42	4,396
Divide between Willow Creek and South Boulder River.....	61	4,948
South Boulder River.....	64	4,565
Fish Creek stage station.....	83	4,134
Parson's Bridge over Jefferson River.....	84	4,083
Beaverhead Rock stage station.....	114	4,464
Beaverhead River Ford.....	149	5,130
Horseplain Creek.....	171	6,252
Divide between Horseplain and Red Rock Creeks.....	182	7,405
Continental Divide.....	198	7,255
Soda Springs.....	363	5,529
St. George.....	383	5,771
Bennington.....	390	5,798
Montpelier.....	394	5,793
Bear River Bridge.....	397	5,744
Ovid.....	400	5,760
Paris.....	404	5,836
Bloomington.....	407	5,905
St. Charles.....	412	5,932
Fish Haven.....	417	5,932
South boundary of Idaho.....	420	-----
Lake Town.....	433	6,001
Randolph.....	454	6,442
Evanston.....	487	6,835
Fort Bridger.....	528	6,656

Route of W. W. De Lacy, from Helena to Salmon City, Montana.

Helena.....	0	4,296
Summit between Helena and Montana City.....		4,353
Montana City.....	8	4,191
Ten-Mile Station.....	10	4,244
Crossing of Big Prickly Pear Creek.....		4,356
Clancy Creek.....		4,457
Second crossing of Big Prickly Pear Creek.....		4,780
Jefferson City.....		4,776
Beavertown.....	24	4,942
Sterrett's.....		5,217
Bouldertown.....		5,000
Boulder Creek.....		4,997
Captain Cook's, on Little Boulder Creek.....	34	4,995
Basin Station.....	44	5,437
Whitehall.....	58	4,639
Pipestone Creek.....		4,463
Right bank of Jefferson River.....		4,565
Fish Creek.....		4,570
Jefferson Bridge.....	78	4,672
Gaffney's.....	87	4,838
Sheridan.....		5,221
Virginia City.....		5,778
Lorraine's.....		4,992
Beaverhead Station.....	102	4,888
Lovell's.....	126.5	5,465
Argenta.....	140.5	6,337

Route of W. W. De Lacy, from Helena, &c.—Continued.

	Miles.	Eleva- tion.
Goodrich's house at Bannack.....	155.5	Feet. 5,896
Divide between Bannack and Horse Plain Creek.....		6,056
Mart. Barrett's, on Hørse Plain Creek.....	167.5	5,665
Pomaine's.....	170.5	5,826
Hamilton's, at mouth of Jeff. Davis Gulch.....	187.5	6,536
Summit of Rocky Mountains.....	193.5	7,796
Stevenson's Junction, Limhi Valley.....	205.5	6,084
Hall's.....	235.5	4,996
Salmon City.....	255.5	4,030

Route of Lieutenant Warren, from Fort Pierre to Fort Kearney.

	0	—
Fort Pierre.....	0	—
Little Missouri River.....	5	1,478
Medicine Creek.....	33	2,220
White River.....	52	1,580
Two-Tail Creek.....	72	1,760
Dog's-Ears Creek.....	87	2,230
Turtle Hill River.....	101	1,995
Rapid River.....	125	2,115
Les Buttes de Sable.....	160	2,330
Muddy Creek.....	235	2,393
Platte River.....	290	2,075
Fort Kearney.....	301	2,000

Route of Governor Stevens, from Fort Benton to Umatilla River. (Pacific Railroad Report, Vol. XII.)

	Between Stations.	
One-half mile above Fort Benton.....		2,769
On Missouri River.....	35	2,480
On Missouri River at Cracon du Nez.....	37	2,752
Milk River, two miles below trading-house.....		2,388
Crossing of Marias River.....	60	2,683
Teton River.....	14	3,109
Teton River.....	52	3,692
Sun River, on bluff.....	8	4,309
Junction of Forks of Sun River.....	1	4,114
Top of Divide.....	17	4,954
Valley of Dearborn River.....	1	4,665
Lewis and Clarke's Pass.....	12	6,537
Big Blackfoot, below mouth of Lander's Fork.....	15	4,610
Mouth of Salmon Trout Creek.....	21	4,426
Near Mouth of Big Blackfoot.....	51	3,247
Mouth of Saint Regis de Borgia River.....	57	2,894
Left bank of Bitter Root River.....	7	2,763
Left bank of Bitter Root River.....	1	2,530
Saint Regis de Borgia River.....	15	3,020
Kamas Prairie.....	73	2,867
Lapwai, at Craig's.....	53	1,240
Fork of Clearwater and Snake Rivers.....	16	612
Touchet River, at Fork.....	47	2,046
Walla-Walla River, at mission.....	32	579
Tamallamp Creek.....	4	532
Wild Horse Creek.....	12	1,704
Umatilla River.....	15	1,020
Umatilla River, six miles above agency.....	18	583

Route from Lake Superior to Winnipeg Lake. (Hind's Exploring Expedition.)

	Miles.	Eleva-tion.
		Feet.
Fort William.....	0	600
Pointe des Meurons.....	10	604
Nicollet Portage.....	33	845
Portage des Maîtres.....	48	944
Great Dog Lake.....	66	1,311
Barrière Portage.....	96	1,317
Savanne Lake.....	107	1,469
Thousand Lakes.....	143	1,433
Cannibal's Lake.....	159	1,386
Pickerel Lake.....	183	1,281
Sturgeon Lake.....	208	1,156
Lac la Croix.....	233	1,117
Grand Falls Portage.....	245	1,066
Lake Nameaukan.....	257	1,045
Rainy Lake.....	301	1,035
Manitou Rapids.....	336	996
Lake of the Woods.....	453	978
Grande Décharge.....	487	950
De l'Isle Portage.....	510	901
Chute à Jacques Portage.....	533	885
Roche Brûlée Portage.....	544	843
Otter Falls.....	560	810
Bonnet Lake.....	585	744
Silver Falls Portage.....	597	656
Winnipeg Lake.....	616	628

PROFILES FROM THE
NINETY-FIFTH MERIDIAN TO THE PACIFIC OCEAN.

The following table exhibits six approximate profiles across the country from the 95th meridian west of Greenwich to the Pacific coast, along the 32d, 35th, 39th, 41st, 45th, and 48th parallels of latitude.

The elevations given are the mean elevations, as nearly as they can be determined, of the country lying between the two meridians, one degree apart, and in the neighborhood, that is, within about 15', of the parallel.

These do not assume to be accurate profiles, but, as the material at hand seems to warrant me in making a beginning in this direction, I have prepared these, with the intention of correcting them as I obtain more material and a more intimate knowledge of the country.

Degrees of Longitude.	32d Parallel. Mean elevation.	35th Parallel. Mean elevation.	39th Parallel. Mean elevation.
95 to 96...	Feet. 500 800	Feet. 650 800	Feet. 1,000 1,000
96 to 97...			
99 to 98...	1,000	1,200	1,200
98 to 99...	1,200	1,500	1,500
99 to 100...	1,500	1,900	2,000
100 to 101...	2,000	2,500	2,500
101 to 102...	3,000 Llano Estacado.	3,500 Llano Estacado.	3,500
102 to 103...	4,500 Llano Estacado.	4,000 Llano Estacado.	4,000
103 to 104 ..	4,000 Llano Estacado.	4,100 Llano Estacado.	5,000
104 to 105...	4,000 Valley of Rio Pecos.	4,500 Head of Rio Pecos.	6,000
105 to 106...	4,500	5,000	9,000 Colorado Range and So'th Park.
106 to 107...	4,000 Valley of Rio Grande.	5,500	11,000 Sawatch and Elk Ranges.
107 to 108...	4,500 Sierra Madre Plateau.	7,000 Zuni Mountains.	8,000 Elk Range.
108 to 109...	5,000 Sierra Madre Plateau.	6,500	4,500 Plateau of the Upper Colorado.
109 to 110...	5,000	5,500	4,500 Plateau of the Upper Colorado.
110 to 111...	4,000	5,000 Colorado Plateau.	4,800 Plateau of the Upper Colorado.
111 to 112...	3,000	6,000 San Francisco Mts.	5,500 Wahsatch Range.
112 to 113...	3,000	5,000	5,000 Great Interior Basin.
113 to 114...	Enters Mexico.....	4,000	5,000 Great Interior Basin.
114 to 115.....		1,500 Valley of Rio Colorado.	5,500 Great Interior Basin.
115 to 116.....		2,500	6,000 Great Interior Basin.
116 to 117.....		2,000	6,000 Great Interior Basin.
117 to 118.....		2,500	5,500 Great Interior Basin.
118 to 119.....		4,500 Sierra Nevada Range.	4,500 Plateau of Walker Lake.
119 to 120.....		3,000 Coast Range.	6,000
120 to 121.....		0	7,500 Sierra Nevada Range.
121 to 122.....			500 San Joaquin Valley.
122 to 123.....			1,500 Coast Range.
123 to 124.....			0
124.....	Mean eleva- tion of Section	3,500	4,500

41st Parallel. Mean elevation.	45th Parallel. Mean elevation.	48th Parallel. Mean elevation.
<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1,000	1,000	1,500
1,200	1,000	1,200
1,600	1,500 Coteau des Prairies.	Valley of Red River. 1,500
2,000	1,500	1,500 Devil's Lake.
2,300	2,000 Coteau du Missouri.	1,500
2,600	1,500 Valley of Missouri River.	1,500 Coteau du Missouri.
3,000	2,000	2,000 Coteau du Missouri.
3,500	2,500	1,800 Valley of Missouri River.
4,500	3,000	2,000 Valley of Missouri River.
6,000	2,500	2,000 Valley of Missouri River.
8,000 Laramie Range.	3,000	2,100 Valley of Missouri River.
8,000	3,000	2,200
North Park and Main Range.	5,000	2,500
7,000	5,000 Big Horn Mts. and Valley.	2,500 Little Rocky Mountains.
6,000	7,000 Yellowstone Range.	2,500 Valley of Missouri River.
7,500 Uintah Mountains.	7,000 Valley of Yellowstone River.	3,000 Valley of Teton River.
6,000	7,000 Valley of the Madison River.	4,000
Wahsatch Range.	6,500 Valley of the Jefferson River.	5,000 Main Range.
4,200	6,500 Main Range and Valley of the	
Great Salt Lake.	Salmon River.	
5,000	5,000 Salmon River Plateau.	3,000
Great Salt Lake Desert.	4,000 Salmon River Plateau.	3,000
6,000 Great Interior Basin.	3,000 Snake River Plateau.	2,500
5,000	2,000 Blue Mountains.	2,500
Great Interior Basin.	3,500 2,500	1,500
4,500	2,000 Valley of Des Chutes River.	1,000 Valley of Columbia River.
Great Interior Basin.	3,000 3,000	1,500
4,500	2,000 1,500	1,000
Great Interior Basin.	2,000 1,000	500
5,000	0 Coast Range.	1,000
5,500	0	0
4,000 Valley of Sacramento River.	3,200	2,300
5,000 Sierra Nevada Range.		
1,000 Valley of Klamath River.		
0		
4,300		

